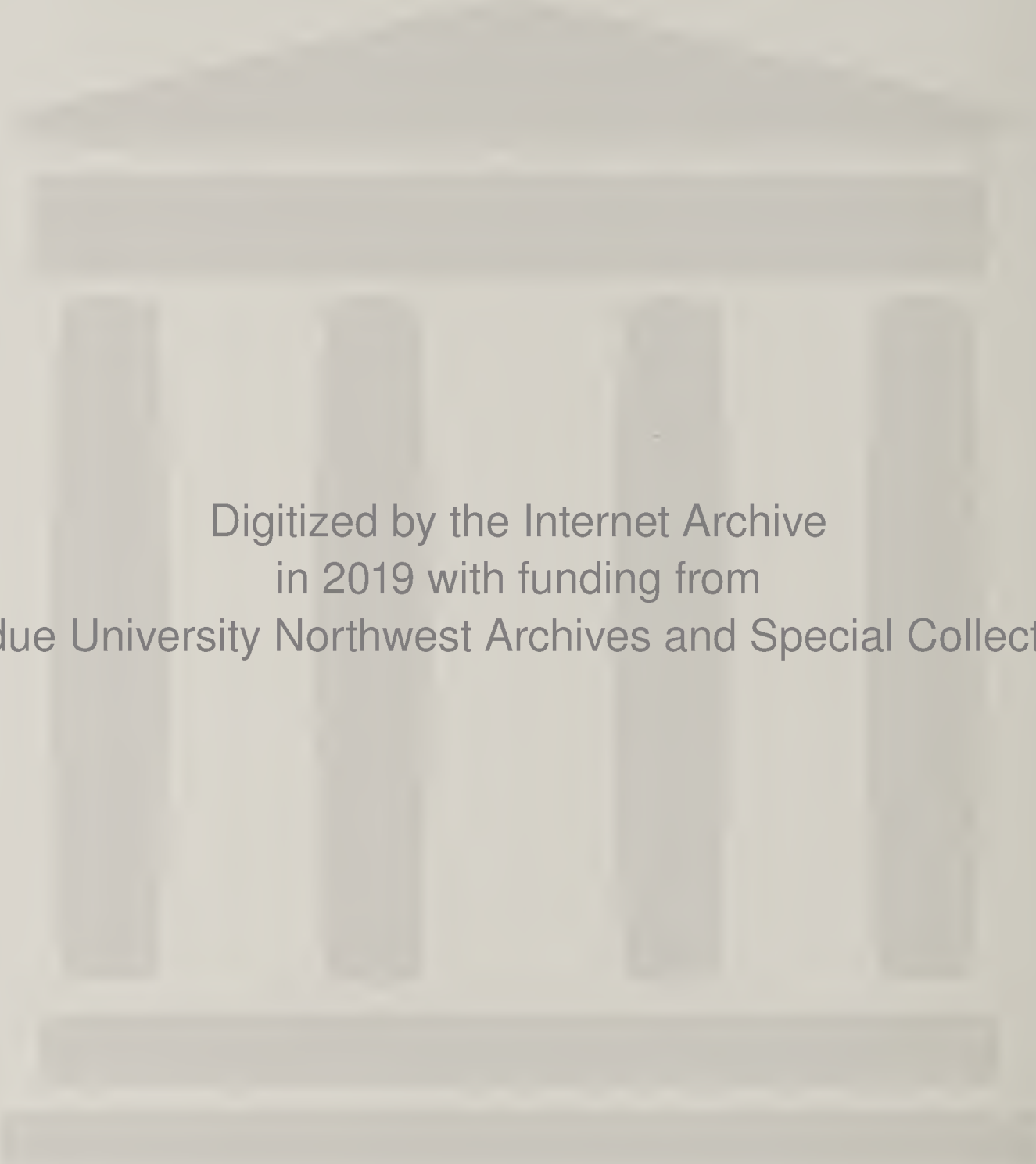


A large, dark rectangular sign with white text. To its right is a smaller square sign with the Purdue University crest. The background features a wooden building, trees, and a flower bed with yellow and purple flowers.

PURDUE
UNIVERSITY
NORTH CENTRAL

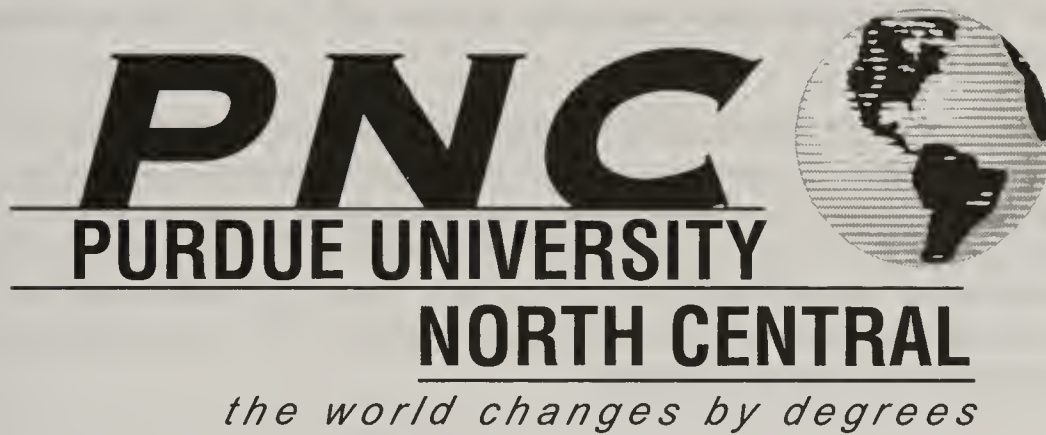


General Catalog 2002-04



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Announcements for the Years 2002-2004

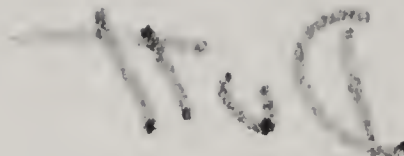
For further information contact:

Office of Enrollment Services
Purdue University North Central
1401 S. US 421
Westville, IN 46391-9542
(219)785-5200 872-0527 462-4197
(800)872-1231 (Inside Indiana)
Extension 5505
FAX: (219)785-5538

*Electronic version available
at Purdue University North Central's Web site:*
www.purduenc.edu

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An Equal Access/Equal Opportunity University



The information contained in this bulletin is subject to change as a result of action by federal and/or state governments, the Trustees of Purdue University, the faculty, and the administration of Purdue University. The content of any individual curriculum is the ultimate responsibility of the respective faculty of each individual department. All degrees, with the exception of those in Business, are offered under the jurisdiction of the appropriate schools of Purdue University. The curricula for Business is governed by the Faculty of Purdue University North Central. Questions concerning the contents of this catalog should be directed to the appropriate department or University official.

Nothing in this catalog should be considered a contract. This is for informational purposes only.

A copy of PURDUE UNIVERSITY REGULATIONS is available for review in the Registrar's Office, Counseling Center, and at the Switchboard. These regulations cover the following areas: History and Organization of the University, Academic Regulations and Procedures, Classification of Students for Tuition Purposes, Statements on Nondiscrimination, Student Conduct, Regulations and Procedures for Recognized Student Organizations, and Regulations Governing the Use and Assignment of University Facilities.

Non-Discrimination Policy Statement

Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of new ideas, and enriches campus life.

Purdue University views, evaluates, and treats all persons in any University related activity or circumstance in which they may be involved, solely as individuals on the basis of their own personal abilities, qualifications, and other relevant characteristics.

Purdue University prohibits discrimination against any member of the University community on the basis of race, religion, color, sex, age, national origin or ancestry, marital status, parental status, sexual orientation, disability, or status as a disabled or Vietnam era veteran. The University will conduct its programs, services and activities consistent with applicable federal, state and local laws, regulations and orders and in conformance with the procedures and limitations as set forth in Executive Memorandum No. D-1 which provides specific contractual rights and remedies. Additionally, the University promotes the full realization of equal employment opportunity for women, minorities, persons with disabilities and Vietnam era veterans through its affirmative action program.

Through this program, the University carries out the requirements of Title VI and VII of the Civil Rights Act of 1964, as amended by the Equal Employment Act of 1972, Federal Executive Orders 11246 and 11375, the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Vietnam Era Veterans Readjustment Act of 1967, the Age Discrimination Employment Act of 1967, the Indiana Civil Rights Act of 1971, as amended, the Civil Rights Act of 1991, Title IX of the Education Amendments of 1972, and all other applicable state and federal laws, guidelines, and regulations.

Questions in regard to the foregoing may be directed to Patricia A. Carlisle, Equal Opportunity Affirmative Action Officer, Schwarz 152.

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PURDUE UNIVERSITY

Officers of Administration

West Lafayette Campus

Martin C. Jischke, Ph.D. President
 Sally Frost Mason, Ph.D. Provost
 Kenneth P. Burns, B.S. Executive Vice President and Treasurer
 Gary E. Isom, Ph.D. Vice President for Research
 and Dean of the Graduate School

North Central Campus

James B. Dworkin, Ph.D. Chancellor
 G. William Back, J.D. Vice Chancellor for Administration
 L. Edward Bednar, Ed. D. Vice Chancellor for Academic Affairs
 George T. Asteriadis, Jr., Ph.D. Assistant Vice Chancellor for Academic Affairs
 Patricia A. Carlisle, M.A. Equal Opportunity/Affirmative Action Officer
 and Special Assistant to the Chancellor
 John T. Coggins, M.A. Dean of Students Office
 J. Jeffrey Jones, M.A. Director of Enrollment and Marketing
 Joseph W. Camp, Jr., Ph.D. Acting Chair, Biological Sciences/
 Chemistry Department
 Linda Duttlinger, Ph.D. Chair, Developmental Studies Department
 Cynthia J. Pulver Fontaine, Ph.D. Acting Chair, Education Department
 S. Kim Genovese, M.S.N., R.N. Director, Nursing Department
 Howard Jablon, Ph.D. Chair, Social Sciences Department
 Keith E. Schwingendorf, Ph.D. Acting Chair, Mathematics/Statistics/
 Physics Department
 Richard M. Scroggin, M.S.B.A. Acting Chair, Computer Technology Department
 Richard L. Taylor, M.S.C.E. Chair, Engineering/Technology Department
 Andrew R. Weiss, Ph.D. Chair, Business Department
 Thomas E. Young, Ph.D. Chair, Letters and Languages Department

GENERAL INFORMATION

LOCATION

PURDUE UNIVERSITY is the Indiana link in a nationwide chain of land grant colleges and universities. In addition to the main campus in West Lafayette, Purdue University has established regional campuses for the purpose of extending educational opportunities to major population areas of Indiana. Purdue University North Central, at the junction of the Indiana Toll Road and U.S. 421 near Westville, serves communities in the north central part of the state.

PURDUE UNIVERSITY NORTH CENTRAL HISTORY

Following World War II, Purdue University offered courses in facilities loaned to the University by the Michigan City and LaPorte schools. In 1948 the Barker Welfare Foundation made the John Barker mansion in Michigan City available to the University and classes were held there beginning in the spring of 1949. Through the 1950s, enrollment at the Barker Memorial Center continued to grow, as did the population of the north central region of the state. In May 1962, Purdue University, through the Ross-Ade Foundation, purchased 160 acres south of Michigan City near Westville at a location that could best serve the residents of LaPorte and Porter counties. The new permanent campus opened in the fall of 1967. Since then, the campus has undergone many changes, indicative of the rapid growth and educational demands of the area. Additional land purchases increased the total acreage to 296.

The campus features three main buildings. Schwarz Hall, built in 1967, contains most administrative offices, as well as the office of Enrollment Services and the Biology/Chemistry, Math/Physics and Social Sciences academic departments. The Library-Student-Faculty Building, completed in 1975, houses the library, cafeteria and bookstore, the Dean of Students office and various student services offices. The Technology Building, completed in 1995, houses the Computing Center, Learning Center and Office of Continuing Education, Technology/Engineering, Education, Business, Nursing, Letters & Languages and Developmental Studies academic departments, as well as other administrative services.

The Indiana Commission for Higher Education designated Purdue University North Central as a general purpose institution in October 1986.

Purdue University North Central is accredited by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools, 30 N. LaSalle St., Suite 2400, Chicago, Ill. 60602-2504; 800-621-7440, www.ncacihe.org. Accreditation attests to the quality of the faculty and staff, excellence of courses and curricula, and adequacy of facilities. Individual academic programs also are accredited by the following:

- Association of Collegiate Business Schools and Programs, 7007 College Blvd., Suite 420, Overland Park, Kan, 66211; 913-339-9356; www.acbsp.org.

- National League for Nursing Accreditation Commission (NLNAC), 61 Broadway, New York, N.Y. 10006; 212-363-5555, ext. 153; www.nlnac.org.
- National Council for the Accreditation of Teacher Educators (NCATE), 2010 Massachusetts Ave. NW, Suite 500, Washington, D.C. 20036-1023; 202-466-7496; www.ncate.org.
- Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, Md. 21202; 410-347-7700; www.abet.org (for Electrical Engineering Technology, Industrial Engineering Technology and Mechanical Engineering Technology).

MISSION

Purdue University North Central is dedicated to providing access to exceptional educational opportunities and is committed to providing, assessing, and enhancing three elements fundamental to a great land grant university: Learning, Discovery and Engagement.

VISION

In the next five years, Purdue North Central envisions:

- Expanding to a Bachelor's degree granting institution with selected Master's degree programs and with the retention or development of Associate degree programs that meet the needs of the community.
- Improving the campus environment to include additional modern buildings, instructional technology, and sufficient property to support future expansion.
- Providing a lifetime learning environment for campus constituents.
- Developing collaborative partnerships with other educational institutions and within the communities served.

CULTURE AND CORE VALUES

Purdue University North Central brings to its service region the national and international reputation of Purdue University with the environment of a small, student-centered, public, liberal arts college.

A high quality education, an exemplary learning environment, a caring atmosphere, and a safe, secure, and convenient campus are all hallmarks of this institution.

UNDERGRADUATE GENERAL EDUCATION POLICY

General education is the component of the undergraduate curriculum devoted to those areas of knowledge, methods of inquiry, and ideas that the Purdue University North Central academic community believes are fundamental and common to all well-educated individuals. General education provides knowledge and understanding of the world, which serves as the basis for continued learning. This educational experience encourages students to develop the ability to represent views and ideas clearly and cogently, analyze, think critically, and formulate reasoned conclusions. Thus, the fundamental and common general education concepts and experiences are infused and enhanced within all program curricula, whenever possible, to assist students in the acquisition of skills, knowledge, attitudes and competencies required to live and serve meaningfully in an uncertain and complex society.

As a result of the general education curricular component at Purdue University North Central, a student shall have acquired appropriate skills, knowledge and competencies to:

- Communicate clearly and cogently in written, oral, interpersonal and collaborative forms.
- Use quantitative and analytical reasoning; use problem solving and critical thinking techniques; approach problems using methods of inquiry appropriate to the discipline.
- Have a working and functional knowledge within the area of computer technology, especially as it relates to communication skills, reasoning skills, problem solving/critical thinking skills and methods of inquiry.

Furthermore, as a result of the general education curricular component at Purdue University North Central, a student shall have had the opportunity to acquire the appropriate skills, knowledge, and competencies to:

- Understand and recognize the significance of human interactions and cultural diversities.
- Understand and recognize the significance of the historical, contemporary, political, cultural and artistic events that have shaped cultures and societies.
- Understand and recognize the significance of moral and ethical values in the decision making process.

EDUCATIONAL OPPORTUNITIES

Purdue University North Central offers academic work at a number of different levels:

- Master’s degree program in elementary education; selected graduate courses in a limited number of subject-matter fields.

- Bachelor’s degree curricula in:

Behavioral Sciences	English
Business (<i>several options</i>)	Liberal Studies
Biological Sciences (<i>several options</i>)	Mechanical Technology
Computer Information Systems	Organizational Leadership and
Technology	Supervision (<i>several options</i>)
Elementary Education	

- Associate degree curricula in:

Architectural Technology	Mechanical Engineering Technology
Building Construction Management	Nursing
Business (<i>several options</i>)	Organizational Leadership and
Civil Engineering Technology	Supervision (<i>several options</i>)
Computer Technology	Science (<i>for students in the sciences, mathematics and engineering</i>)
Electrical Engineering Technology	
Industrial Engineering Technology	

- Certificate curricula in:

Business & Professional Comm.	Mechanical Engineering Technology
Computer Technology	Organizational Leadership and
Business	Supervision
Human Resources	Quality Control

- Freshman and sophomore courses are offered in areas leading to the Bachelor of Science or the Bachelor of Arts degrees at other Purdue campuses or at other colleges or universities. In order to complete the baccalaureate degree in one of these programs, transfer to another campus is necessary. Students who plan to transfer should work with an appropriate academic advisor at the campus with the baccalaureate degree to ensure transferability of credits.

- Courses are offered at various locations within LaPorte and Porter counties. Most sites offer a selection of basic liberal arts courses as well as introductory computer, business and supervision courses. The Portage site also offers courses allowing a student to complete an associate degree or certificate in business or organizational leadership and supervision.

NON-CREDIT CONTINUING EDUCATION

As part of its educational mission, Purdue University North Central offers non-credit continuing education courses in these general areas:

Training for Business, Industry and School Corporations. Conferences and short courses for professional development are offered, as well as contract training programs customized to meet an individual client's needs.

Real Estate Licensing. Licensed by the State of Indiana, the office offers nine-week preparatory courses for both salespersons and brokers in both fall and spring.

Personal Development. A broad schedule of courses is offered throughout the year, including courses to enhance computer skills. The Super Saturday/Super Summer program is conducted for high ability children in grades K-8.

ENROLLMENT SERVICES

ADMISSION

GENERAL REQUIREMENTS

All persons wanting to take advantage of the opportunity for higher education at the North Central campus of Purdue University must file an application for admission. Address requests for information and application forms to:

Office of Admissions
Purdue University North Central
1401 S. US 421, Westville, Indiana 46391-9542

Information and application forms also are available on the campus web site:
www.purduenc.edu.

Applicants to the University must be high school graduates or G.E.D. recipients (see G.E.D. section on page 13). Prospective students should complete the application according to instructions and then forward the form to the high school from which they are to be or already have graduated. The high school should then complete the application and return it to the Office of Admissions at the above address.

High school students should apply during the seventh semester of high school, or as soon as possible thereafter. High school graduates should apply immediately. This enables the University to evaluate fully an applicant's eligibility for consideration and to notify the applicant at an early date of action taken, thus allowing the applicant to make educational plans.

ADMISSION REQUIREMENTS

An admission decision is made after an evaluation of the student's total record. Quality requirements include subjects taken, grades in academic courses, high school rank, test scores, and counselor's comments. An individual's eligibility for consideration will depend upon many factors, among them:

- Subject matter requirements for the school or program to which the student is applying.
- High school class standing.
- College Entrance Examination Board test results.
- High school comments and recommendations.
- Previous college work, if any.

Quality Requirements are listed on page 12.

In support of the state's efforts to strengthen Indiana's high school students' academic preparation, Purdue University North Central encourages all students to complete the Core 40 requirements and to consider earning the Academic Honors Diploma.

High School Subject Matter Requirements for Applicants Entering Fall 2002

School/Program	Mathematics ¹	Science ²	English	Quality Guidelines
Agriculture	6 sem.	6 sem.	8 sem.	upper 1/2
Business	2 sem.		6 sem.	upper 1/2
Requirements beginning 1/03/03	6 sem.	4 sem.	8 sem.	upper 1/2
Consumer & Family Sciences	6 sem.	4 sem.	8 sem.	upper 1/2
Education	6 sem.	4 sem.	8 sem.	selective
Engineering	6 sem.	6 sem. (2 must be chem.)	8 sem.	selective
Health Sciences	6 sem.	6 sem.	8 sem.	upper 1/2
Liberal Arts	6 sem.	4 sem.	8 sem.	upper 1/2
Physical Ed. (B.P.E.)	6 sem. ³	4 sem.	8 sem.	upper 1/2
Management (incl. Econ) ⁴	6 sem.	4 sem.	8 sem.	upper 1/2
Nursing ⁵	4 sem.	4 sem (2 must be bio. & 2 chem.)	8 sem.	selective
Requirements beginning 1/03/03	6 sem.	6 sem.(2 must be bio. & 2 chem.)	8 sem.	selective
Prepharmacy	6 sem.	6 sem. (2 must be bio. & 2 chem.)	8 sem.	upper 1/2
Science	6 sem.	6 sem.	8 sem.	upper 1/2
Technology	6 sem.	4 sem.	8 sem.	upper 1/2
Undergraduate Studies Program	6 sem.	4 sem.	8 sem.	upper 1/2
Veterinary Technology				
Bachelor's	6 sem.	6 sem. (2 must be bio. & 2 chem.)	8 sem.	selective
Associate	4 sem.	2 bio.& 2 chem.	8 sem.	selective

¹ Academic math includes algebra, geometry, trigonometry, calculus, analysis, etc.
² Lab science includes college prep courses such as biology, chemistry, physics, anatomy, physiology, earth/space science, etc.
³ Four semesters must be academic math, which includes algebra, geometry, trigonometry, calculus, analysis, etc.
⁴ Economics major offered jointly by the schools of Liberal Arts and Management. Make application to Management.
⁵ Math /Science requirements must be completed with grades of "C" or better.

FOREIGN LANGUAGE REQUIREMENTS

Effective fall 2004, students applying to the following Purdue Schools or programs will be required to have four semesters of foreign language for admission consideration.

- School of Education
 - Schools of Engineering
 - School of Health Sciences
 - School of Liberal Arts
- School of Management
 - Prepharmacy
 - School of Science
 - Undergraduate Studies Program

For fall 2005, the School of Agriculture will require four semesters of foreign language for admission consideration.

TEST SCORE REQUIREMENTS

The SAT or ACT examination is required of all applicants who graduated from high school within three years. The SAT or ACT is recommended but not required of applicants who graduated more than three years ago. For applicants currently attending high school, it is preferred that the SAT or ACT examination be taken in the spring of the junior year.

ALTERNATIVE ACTIONS ON APPLICATIONS

If an applicant's academic background does not meet the entrance standards and/or subject matter requirements for direct admission to a particular degree program, the applicant may be granted one of the following alternative offers of admission:

- Admission to a "pre" program of the Department of Development Studies (generally a combination of developmental and college-level courses).
- Admission to the Bridge Program (predominately developmental coursework).
- Admission on probation (admission with the understanding that if the student does not achieve a specified average in the first semester, the student will be dropped from the University).

All of the alternative admission offers are granted based on the belief that the student has a reasonable chance of gaining regular admission to a program at a later date. If the applicant's academic history cannot support this belief, the applicant will be denied admission to the University.

Regardless of the type of admission offer the applicant receives, all freshmen are required to take the Student Assessment and Measurement (SAM) prior to registering for classes. This three-test battery assesses the student in English, math and reading and helps to determine proper course placement. If the student does not demonstrate college-level ability in any of the three areas, an appropriate developmental course will be recommended.

INTERNATIONAL STUDENTS

Applicants from other countries will be admitted on the basis of credentials certifying to the completion of preparatory studies comparable to requirements for United States citizens applying at the same entry level. Applicants also must furnish evidence of adequate financial support for the entire period of their schooling. Like all new students, applicants also must take the Student Assessment and Measurement tests prior to registration.

Official English translations must accompany transcripts and other credentials. The applicant is required to submit satisfactory evidence of the ability to read, write and speak English, as shown by a score of 550 or greater on the paper-based or 213 or greater on the computer-based TOEFL (Test of English as a Foreign Language) test.

TRANSFER STUDENTS

An applicant transferring from another college or university must fulfill the following requirements in order to be considered for admission:

- Submit an application for admission and an official high school transcript. High school transcripts are required of all students who do not hold a Bachelor's degree.
- Submit an official transcript of work done in institutions previously attended to the Office of Admissions at the North Central campus.
- Meet subject matter requirements, have a C average and be in good standing at all schools attended.
- Submit a \$30 transcript evaluation fee.

TRANSFER CREDIT

Transfer credit will be given at Purdue University for courses of equivalent content successfully completed at another accredited college. Advanced standing will be determined on the basis of these credits.

Grades are not transferred; only credit in the course is recorded.

Credit earned at other institutions will be evaluated by the faculty of the appropriate department or school in terms of how it fulfills the graduation requirements at Purdue University. Evaluation of credit is completed after a student is admitted to the University.

GENERAL EDUCATIONAL DEVELOPMENT (G.E.D.)

Prospective students who have earned a G.E.D. diploma should complete the application according to instructions, attach a copy of their G.E.D. test results, and forward the forms to the high school they last attended.

Qualified G.E.D. students are admitted to the School of General Studies Bridge Program which is designed to serve as a bridge from the student's present academic level to a level of competency needed for a successful performance.

NON-DEGREE STUDENTS

Admission policies require that any applicant who wishes to pursue undergraduate coursework for college credit must be a high school graduate or G.E.D. recipient prior to entering the University. This includes non-degree applicants who do not wish to be considered as candidates for a degree.

A non-degree student is generally limited to enrolling in a maximum of seven hours per semester during the fall and spring semesters, and is generally limited to enrolling in no more than four hours during the summer session. A student may apply no more than 18 semester hours of work completed as a non-degree student toward an undergraduate degree at Purdue University.

A personal interview with a member of the Office of Admissions staff prior to admission as a non-degree student is encouraged. All course work taken in non-degree status will be reviewed for applicability prior to admission to a degree program.

All students who have been previously enrolled in another institution must be in good scholastic and social standing prior to enrollment at Purdue. Application for admission as a non-degree student should be made directly to the Office of Admissions at the North Central campus.

SUPERIOR HIGH SCHOOL STUDENTS

A high school student with a superior scholastic record during the first three years of high school may qualify for admission to the North Central campus as a non-degree student without high school graduation.

A high school student who has completed a minimum of four semesters of high school will be considered for admission, provided he or she meets two of the following three criteria.

- Ranks in the upper one-third of the class.
- Has an accumulative grade point average of 3.0 or greater (on a 4.0 scale).
- Has a SAT combined score of 1000 or ACT combined score of 21.

Purdue cannot be held responsible for guaranteeing high school diplomas under this arrangement, but it cooperates with whatever arrangement the state or local school system may have for awarding a high school diploma to a successful participant in this plan.

RE-ENTRY STUDENTS

Any person in good standing who has formerly attended Purdue but has not been in attendance for a semester or more must submit an application for re-entry which may be obtained from the Registrar's Office. Each individual situation will determine the status of the person's eligibility for re-entry.

RE-ADMISSION OF STUDENTS

Any person who has been formally dropped from the University for academic reasons and wishes to re-enter must apply for re-admission to the Scholastic Delinquencies and Readmissions Committee. Forms for initiating this procedure are available in the Registrar's Office at the North Central campus.

STUDENT ASSESSMENT AND MEASUREMENT

Appropriate placement in the proper course level is vital to academic success, especially in the first semester. Therefore, all beginning undergraduate students and transfer students admitted without appropriate credit are required to take the Student Assessment and Measurement (SAM), to establish their skill level in English composition, math and reading.

The SAM must be completed prior to registration. It is offered through the Developmental Studies Department at various times and dates throughout the year. There is no fee. Contact the Office of Admissions or the Developmental Studies secretary for information.

ADVANCED PLACEMENT AND ADVANCED CREDIT

Advanced placement means that a student is placed in an advanced-level course but no credit toward a degree is awarded for prior courses.

Advanced credit means that college credit is established in one or more subjects and the total credit is recorded on the student's record. Advanced credit usually involves advanced placement.

The student who has taken a college preparatory program, has achieved at a high level, and has good test results should seriously consider the possibility of establishing advanced credit. Personal factors as well as academic record should be considered. The table on the following page shows credits awarded for Advanced Credit. Advanced credit or advanced placement can be established by any of the following methods:

Advanced Credit Examinations. Any questions about advanced credit should be directed to the Office of Admissions.

College Board Advanced Placement Program. Credit can be established on the basis of test results taken at the completion of the advanced placement course in high school. The score required to establish credit varies according to the test.

COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP)

This program evaluates non-traditional college-level education such as independent study, correspondence work, and credit earned from non-accredited institutions.

General Examination. Credit will be given on the basis of the General Examination only for the English Composition exam with essay. Transfer students who previously attended a nonaccredited institution may take the General Examination. If the student's average score is 500 or above on the five tests, the credit established at the non-accredited institution may be evaluated for credit at Purdue.

Subject-Matter Examinations. Purdue credit may be established by taking the subject-matter examinations listed on page 17.

ADVANCED CREDIT (AP)			
Subject Area	College Board/Advanced Placement (AP) Score	Purdue Course	Purdue Credit Granted (Sem. Hrs.)
Art			
Art history	3, 4, or 5	A&D 226	3
Studio art	3, 4, or 5	A&D 113	3
Biological Sciences	4 or 5	BIOL 121, 122, 131, & 132	8
Chemistry	3 4 or 5	CHM 111 CHM 115 & 116	3 8
Economics Micro & macro	3, 4, or 5 (on both tests)	ECON 210	3
English	3	ENGL 101	3
Language & comp.	4 or 5	ENGL 103	3
Literature & comp.	4 or 5	ENGL 231	3
Environmental Science	4 or 5	EAS 113	3
Government			
American govt. and/or politics	4 or 5	POL 101	3
Comparative govt. and/or politics	4 or 5	POL 141	3
History			
American	4 or 5	HIST 151 & 152	6
European	4 or 5	HIST 104	3
Mathematics			
AB	4 or 5	MA 161	5
BC	4 or 5	MA 161 & 162	10
Modern languages	3 4 5	101 & 102 101, 102, & 201 101, 102, 201, & 202	6 9 12
Physics			
C Electricity & magnetism	5	Refer to Section/Dept.	
B	5		
Psychology	4 or 5	PSY 120	3
Statistics	4 or 5	STAT 301	3

College-Level Examination Program (CLEP)			
CLEP Subject-Matter Exam	Purdue Equivalent	Credit	Score Required
American history I	HIST 151	3	50+
American history II	HIST 152	3	50+
Biology, general	BIOL 121, 122, 131, 132	8	48+
Calculus, with elementary functions	MA 165 & 166	10	55+
Chemistry, general	CHM 100	3	55+
	CHM 101 & 102	7	70+
	CHM 111	3	50+
	CHM 111 & 112	6	65+
	CHM 115	4	55+
	CHM 115 & 116	8	70+
College algebra — trigonometry	MA 151	5	57+
Education psychology	EDPS 230	3	51+
Human growth and development	CDFS Undistributed	3	45+
Psychology, general	PSY 120	3	47+
Sociology, introductory	SOC 100	3	45+
Western civilization I	HIST 102 & 103	6	50+
Western civilization II	HIST 104	3	50+

AUDITING CLASSES (VISITORS)

A person who is not already enrolled as a student in the University and who wishes to attend a course in the University without credit shall obtain a visitor's permission form from the Registrar's Office and complete it, stating the visitor's name, the number of the course, the date of attendance permitted, and the fact that no credit is to be allowed. The Registrar shall issue a visitor's permit upon written recommendation of the instructor and approval by the head of the department administering the course. No person who is ineligible for readmission by reason of that person having been dropped from the University for scholastic or other reasons shall be eligible to attend classes as a visitor.

A person who has status in the University by reason of admission to and registration in a definite classification may enroll in a course as a visitor. The assignment and enrollment must be completed by the regular procedure for visitor registration. The assessment of fees and determination of allowable load shall be in accordance with the credit value or equivalent of the course(s) involved. A visitor in a course shall be entitled to hear lectures, recitations, and oral quizzes. A visitor shall not participate in classroom exercises except as invited by the instructor. The visitor shall neither submit papers, when tests or examinations are given, nor take part in laboratory work. A visitor shall receive no credit for the course. However, if the visitor has been, is, or shall be registered later as a student in the University, then that person may apply for examination for credit, under the usual rules, in the course which was attended as a visitor.

HOUSING

Purdue University North Central is a commuter institution. Housing accommodations are not available on campus. However, apartment facilities exist within a 10-15 mile radius. It should be understood that there is no public transportation available to the campus.

CAREER SERVICES AND INTERNSHIPS

The Career Services Office administers an internship program which matches students with local employers in their area of career interest. Qualified students may be eligible to receive academic credit for their internship experience. In addition, Career Services offers an on-line job listing and resume referral system, as well as one-on-one assistance with resume writing and other job search issues. PNC students may also take advantage of job search assistance offered at the West Lafayette campus by registering with the North Central campus.

FINANCIAL AID

The Financial Aid staff works with prospective and current students in finding sources of financial aid for their college educations and completing the application process. Purdue University North Central participates in Title IV federal, state and campus-based financial aid programs. To take advantage of all options available, students should contact a financial aid officer well in advance of the semester in which they plan to register.

TYPES OF ASSISTANCE

Financial aid may be gift assistance or self-help. Gift assistance includes Federal Pell Grants, Indiana Higher Education Awards, Federal Supplemental Education Opportunity Grants and scholarships. Several tuition remission programs, including Child of Disabled Veteran tuition remission and Valedictorian/Salutatorian tuition remission also are available. Self-help includes Federal Stafford Loans (subsidized and unsubsidized), Parent Loans for Undergraduate Students (PLUS), Perkins Loans and Federal Work Study. Details on both gift assistance and self-help can be obtained from the Financial Aid office.

THE APPLICATION PROCESS

Applying for student financial aid is an annual activity that begins many months before the time the aid will be needed. The Free Application for Federal Student Aid (FAFSA) — or, for previous filers, a Renewal FAFSA — is the key to determining the kind and amount of assistance a student can receive. Students who submit the FAFSA by March 1 prior to the academic year they will be attending will be considered for all available types of financial aid. Those filing after the March 1 priority date can be considered only for federal financial aid programs. Students must complete the FAFSA; in addition, students and/or families may be required to submit other documentation such as federal tax returns.

SATISFACTORY ACADEMIC PROGRESS POLICY FOR FINANCIAL AID RECIPIENTS

Purdue University North Central will provide financial assistance to students whose academic progress meets certain criteria set forth by the University. To remain eligible for aid, students must make satisfactory progress toward a degree as outlined in the Satisfactory Academic Progress Policy, which is available upon request in the Financial Aid Office.

Credit hours transferred from other institutions will be included in the number of semester credit hours earned when these hours are accepted in a specific degree area. Credit hours are counted regardless of Financial Aid status. Letter grades of E, F, I, W, and N do not count as completed credits for progress.

Students who do not successfully complete courses at the levels set forth by the Financial Aid Office are not making satisfactory academic progress and will be denied federal, state, and university aid (including grants, scholarships, loans,

and employment), administered by Purdue University North Central. Financial Aid recipients will have their academic progress reviewed at the end of each semester. Also, students who do not complete at least one course during a semester may be denied aid after their first semester. The students may appeal financial aid denial by following the procedures outlined in the Progress Policy. Academic/Financial Aid suspension from Purdue University North Central will delay consideration for financial aid reinstatement until the student is in compliance with the satisfactory Academic Progress Policy.

For a detailed copy of the Satisfactory Academic Progress Policy and the appeal process contact the Financial Aid Office.

Class attendance is mandatory for Title IV financial aid recipients.

REGISTRATION

ADVANCE REGISTRATION

Approximately midway through each semester, opportunity is provided to register for the following semester. Advance registration eliminates standing in line and assures preferential scheduling. Advanced registered students are billed for fees and may pay fees by mail, web or in person. New students will be informed by the Admissions Office of registration times. Every effort should be made to register at these times.

REGULAR REGISTRATION

For students unable to participate in the advance registration process, a registration period is held just prior to the beginning of classes. Consult the current semester schedule for dates and times or contact the Registrar's Office.

LATE REGISTRATION

The late registration period for the fall and spring semesters ends on Friday of the first week of classes. In the summer session, the late registration period ends on Wednesday of the first week of classes. Registration during this period will incur a late registration fee (see Fee section).

SCHEDULE REVISIONS

Schedule revisions may occur following the beginning of a semester or session and are governed by policies intended to be uniformly administered across the various schools of the University. Students may revise their schedules in accordance with the following policy:

Course Additions, Change of Level, Change of Pass/Not-Pass Option. A student may add a course, change course level, or change the pass/not pass option during the first four weeks of a semester or the first two weeks of a summer session by obtaining on the schedule revision form the signatures of the academic advisor and the instructor of the course to be added or changed, if in

their judgments the student could satisfactorily fulfill the course objectives. In the case of extenuating circumstances, course changes may be made during weeks five through nine of a semester or during weeks three through four and one-half of a summer session, upon recommendation of the student s academic advisor, instructor, and head of the department in which the course is listed. Such course changes shall not be made during the last seven weeks of a semester or three and one-half weeks of a summer session.

Week	Restrictions
1	Approval of academic advisor.
2-4	Approval of academic advisor and instructor.
5-9	Extenuating circumstances only. Approval of academic advisor, instructor, and head of the department in which the course is listed.
10-16	Not permitted.

Cancellation of Assignment. Students shall receive a grade for every course in which they are assigned—unless the course assignment has been properly cancelled at the Registrar s Office upon presentation by the student of a request approved by the academic advisor. If there are extenuating circumstances, these must be stated on the request. When a course assignment is cancelled prior to the end of two weeks of a semester or one week of a summer session, the course will not be recorded on the student s record. When a course assignment is cancelled after two weeks and prior to the end of four weeks of a semester or after one week and prior to the end of two weeks of a summer session, a grade of W shall be recorded.

After four weeks and prior to the end of the twelve weeks of a semester or after two weeks and prior to the end of six weeks of a summer session a course assignment may be cancelled upon the request of the student with the approval of the academic advisor. The instructor shall indicate whether the student is passing or failing, unless the student is classified as a freshman or a non-degree student. If the student is not passing, the case may be referred by either the student or the instructor to the Dean of Students, who, after consultations with the dean or the designee of the student s school and other appropriate University agencies, shall determine whether there are sufficient extenuating circumstances beyond the student s reasonable control to justify the cancellation of the course assignment without a failing grade.

No course assignment shall be cancelled within the last four weeks of any semester or two weeks of a summer session.

A student s enrollment in a course may be cancelled for excessive absences by the Committee on Scholastic Delinquencies and Readmissions upon the recommendation of the instructor with the concurrence of the academic advisor and the approval of the dean of the student s school. The appropriate directed grade shall be recorded.

Week	Restrictions
1-2	Approval of academic advisor; course will not be recorded.
3-4	Approval of academic advisor, course will be recorded with grade of W.
5-12	Approval of academic advisor. The instructor shall indicate whether the student is passing or failing. A grade of W, WF, or WN will be recorded. In case of a W, WF, or WN exceptions shall be determined by the Dean of Students. Undergraduate students with a semester classification of 0 and fewer than 31 hours of college credit, or with a semester classification of 1 or 2, need not have their instructor s signature. Grades recorded for these students will be W.
13-16	Course assignments cannot be cancelled during this period.

The cancellation of all course assignments constitutes withdrawal from the University. Cancellation of all course assignments as a result of withdrawal shall be treated and recorded in the same manner as the cancellation of a single course assignment with the additional provision that the Dean of Students shall determine and assign the appropriate effective date to the withdrawal.

EXCEPTIONS

Exceptions to the preceding regulations for registration, schedule revision, and cancellation of assignment may be made for courses that do not span the regular semester or summer session.

CLASS ATTENDANCE

Students are expected to be present for every meeting of the classes in which they are enrolled. All matters relative to attendance, including making up of work missed, are matters for arrangement between the student and instructor involved. It is expected that all instructors will, at the beginning of the semester, make a clear statement to all of their classes regarding their policy for handling absences. Students who fail to meet their class engagements satisfactorily may be denied credit for exercises missed. The instructor will be responsible for counseling with the student whose absences endanger academic performance.

A problem of excessive absences may be referred to the Dean of Students by either the instructor or the student if further information is needed or if either feels that further discussion would resolve the problem. Instructors obtaining information concerning the absence of a student due to personal factors are requested to report such knowledge at once to the Dean of Students. If a student is absent from all the meetings of any regularly scheduled class for a period of two successive weeks, the student may be reported to the Dean of Students for appropriate action. If a student becomes seriously delinquent in attendance, the student may be dropped from the course by the Committee on Scholastic Delinquencies and Readmissions.

Class attendance is mandatory for Title IV financial aid recipients.

COURSE WITHDRAWAL

In order to withdraw from any class, a student must complete a drop card approved by an advisor and submit it to the Registrar's Office. Discontinuance of class attendance is not the basis for withdrawal, and students who do not notify the Registrar's Office when they plan to withdraw will be given a failing grade in each course involved.

ALLOWABLE ACADEMIC LOAD

A student's academic load shall be arranged, so far as possible, in accordance with the following policy:

Credits in excess of 18 hours during a regular session should be carefully monitored by the academic advisor, who may wish to consult with appropriate University personnel concerning the student's prognosis for success. Unless the student's curriculum requirement for that session is specified as greater than 18 credits, approval by the department chairperson of the student's curriculum and by the Vice Chancellor for Academic Affairs must be obtained before the student may be assigned more than 18 credits.

In summer session, no one may be assigned to more than nine credits without approval by the department chairperson of the student's curriculum and by the Vice Chancellor for Academic Affairs.

ASSIGNMENT TO INTENSIVE COURSES

An intensive course is one that meets for four weeks or less. No person shall be permitted to register for two intensive courses in the summer session at the same time. In general, no one who is taking an intensive course shall be permitted to take another non-intensive course at the same time, except, in special cases, with the approval of the instructor in the intensive course, the head of the department administering the intensive course, and, for graduate students, the dean of the Graduate School.

ASSIGNMENT TO A DEPENDENT COURSE

A student who received a grade of F or N in any course shall not be admitted to any dependent course (one requiring the failed course as a prerequisite as set forth in this catalog), and any assignment to or enrollment in such dependent course shall be cancelled. Enrollment in a dependent course also may be cancelled if the student has not taken the prerequisite course or otherwise satisfied the stated requirements for enrolling in the course.

A student who received a grade of E, I, or PI in any course may be admitted to a dependent course on trial with the approval of the appropriate department chairperson administering the course. A transfer student deficient in prerequisite courses may also be admitted to a dependent course on trial with the approval of the department chairperson. If any student on trial is reported delinquent, the student's assignment to the course may be cancelled upon the recommendation of the instructor and with the concurrence of the department chairperson.

If a student on trial in a dependent course completes the course with a passing grade, his achievement may, by prior agreement, be construed as satisfying the requirements for changing an E grade in any prerequisite course in the same department, provided the department chairperson approves and reports the change of grade properly to the Registrar. However, satisfactory work in a dependent course shall not relieve the student of the requirement to complete required work in any prerequisite course in which a grade of I, or PI (incomplete) was received. None of these provisions shall deprive a student of the opportunity to resolve a grade of E, I, or PI in the normal manner.

TRANSFER TO ANOTHER PURDUE CAMPUS

Upon the completion of the semester or summer session, a student may transfer enrollment from the North Central campus to another Purdue University campus, provided all requirements are met. Program requirements vary. To initiate this process the student must complete an appropriate form available through the Enrollment Services Office. Following this procedure an Authorization for Enrollment form from the intended campus of registration and instructions for registration will be sent to the student.

Students must be admitted to a degree program of Purdue University before they are eligible to transfer. Bridge students must meet all deficiencies and be academically admissible to a desired program prior to seeking admission to another school.

UNIVERSITY FEES

Fees are set by the Board of Trustees of Purdue University and are subject to change by the Board without notice.

COURSE FEES

As a regional campus, Purdue University North Central has a fee structure different from that at the West Lafayette campus. Fees are based on an established amount per credit hour. In addition, a laboratory fee will be charged if the course includes laboratory work. In general, a student will be considered a resident for tuition purposes if that student has lived in the State of Indiana for at least the 12 months preceding the first day of classes for the semester in which admission is sought.

Graduate students who have received baccalaureate degrees will pay higher fees than undergraduate students unless they are:

- Pursuing an additional baccalaureate degree in a discipline different from that of the baccalaureate degree currently held.
- Enrolling in undergraduate courses clearly for personal enrichment or occupational requirements and no intent exists toward pursuing an advanced degree.

Questions concerning the policy or the classification of an individual student should be addressed to the Registrar. Refer to the latest schedule of classes for the credit hour and laboratory fee schedule or call the Office of the Registrar.

OTHER FEES

Student Service Fee. All students will pay this fee, which is refundable at the same percentage as class fees.

Technology Fee. All students will pay this fee, which is refundable at the same percentage as class fees. The money from this fee is used to purchase computers and other technology equipment for student use.

Late Registration Fee. A late registration fee is assessed per course, with a set maximum total. This fee is assessed if the student registers on or after the first day of classes. The fee is nonrefundable.

Breakage Fees. Course fees include the cost of normal breakage and wear and tear on equipment. However, an additional charge will be levied against individuals for excessive waste, loss, or breakage that may occur. Such special charges must be paid before course credit will be given.

Encumbrance Fee. If a student fails to fulfill any financial obligation to various University departments, that student s records will be encumbered and a fee will be assessed to the student by the department that issued the encumbrance. Prior to the assessment of the encumbrance fee, the student will be advised in writing of the outstanding financial obligation and will be given a specified time to settle the account.

If a student s records are encumbered because of outstanding financial obligation, that student will not be allowed to register for an additional semester at Purdue University, nor will a student s transcript be released until the financial obligation and encumbrance fee are paid.

REFUNDS

If a student withdraws, course fees will be refunded as follows:

Period of Withdrawal	Refund Percentage	
	Fall & Spring Semesters	Summer Session
First week	100	100
Second week	60	40
Third week	40	0
Fourth week	20	0
Fifth week	0	0

Title IV students are subject to Title IV refund policies. See the current semester schedule under refunds for details. A copy of the refund schedule also is available in the Bursar's Office, 127 Schwarz Hall.

To be eligible for a refund, students must complete the necessary withdrawal forms in the Registrar's Office.

INSURANCE

Low-cost University accident and health insurance is offered annually to all students carrying an academic load of three credits or more. Students may enroll in this program at the beginning of each semester. Information and applications are available in the Bursar's Office and the Dean of Students Office.

GRADING

ASSIGNING OF GRADES

Instructors will assign a grade for each course in which the student is enrolled at the close of a session. The student shall be responsible for the completion of all required work by the time of the last scheduled meeting in the course unless the assignment to the course has been properly cancelled. The grade shall indicate the student's achievement with respect to the objectives of the course.

Courses for Credit:

- A highest passing grade.
- B
- C
- D lowest passing grade; passing minimal objectives of the course.
- E conditional failure; failure to achieve minimal objectives, but only to such limited extent that credit can be obtained by examination or otherwise without repeating the entire course. This grade represents failure in the course unless and until the record is duly changed within one semester. It cannot be changed to a grade higher than a D.
- F failure to achieve minimal objectives of the course. The student must repeat the course satisfactorily in order to establish credit in it.
- P passing grade for the pass/not pass option; equivalent to grade A, B or C.
- N not passing for the pass/not pass option. Issued when the student's grade would be a D or F under the letter grade option.

Pass/Not Pass Option. The pass/not pass option provides students with the opportunity to broaden their educational foundations with minimal concern for grades earned. The option is open to all students in the University subject to the regulations of the school in which the student is enrolled. Subject to the regulations of each curriculum, this option may be elected in any course which does not already appear on the student's academic record and in which the student is otherwise eligible to enroll for credit with letter grade. A student may not elect this option for more than 20 percent of the total credits required for graduation.

A student who is enrolled in a course under this option has the same obligations as those who are enrolled in the course for credit with letter grade. In reporting final grades in the course, the instructor will report that any such student who would have earned a grade of A, B, or C has passed the course, and that any other such student has not passed.

For Incomplete Work, either credit or noncredit:

- I incomplete; no grade; a temporary record of work which was interrupted by unavoidable absence or other causes beyond a student's control, and which work was passing at the time it was interrupted. An instructor may require the student to secure the recommendation of the Dean of Students that the circumstances warrant a grade of incomplete. The student must achieve a permanent grade in the course no later than the 12th week of the second subsequent semester of enrollment, or the I grade will revert to a failing grade. If the student is not enrolled for a period of three years following the semester in which the incomplete is given, then the incomplete grade will be permanent. The grade will not revert to a failing grade, nor will the student be able to earn credit for the course by completing the work.
- PI incomplete, for pass/not pass option. Has the same provisions as the I for letter grade option.

Directed Grades. The Registrar is directed to record the following grades and symbols under special circumstances:

- W withdrew; a record of the fact that a student was enrolled in a course and withdrew or cancelled the course after the second week of the regular semester.
- WF withdrew failing; a record of course cancellation during the fifth to twelfth week of the regular semester, at which time, according to a statement from the instructor, the student was not passing. It does not affect index computations.
- WN withdrew not passing; the same as WF for a credit course taken under the pass/not pass option. It does not affect index computations.
- IF unremoved incomplete failing; for a credit course in which a student received an I grade, a directed record of the student's failure to achieve a permanent grade by the 12th week of the second subsequent semester of enrollment. This grade counts in all respects as a failing grade.
- IN unremoved incomplete; not passing for a credit course taken under the pass/not pass option under which the student received a PI grade. The same as an IF grade except that it does not affect index computations.

GOOD STANDING

For purposes of reports and communications to other institutions and agencies and in the absence of any further qualification of the term, a student shall be considered in good standing unless he or she has been dismissed, suspended, or dropped from the University and has not been readmitted.

SCHOLARSHIP INDEXES

The scholarship standing of all regular students enrolled in programs leading to an undergraduate degree shall be determined by two scholarship indexes, the semester index and the graduation index.

- The semester index is an average determined by weighting each grade received during a given semester by the number of semester hours of credit in the course.
- The graduation index is a weighted average of all grades received by a student while enrolled in the curriculum plus all other grades received in courses taken in other curricula offered by the University and properly accepted for satisfying the requirements of the curriculum of the school in which the student is enrolled. With the consent of the appropriate academic advisor, a student may repeat a course. In the case of courses which have been repeated, or in which conditional grades have been removed by examination, or for which a substantially equivalent course has been substituted, the most recent grade received shall be used.
- For the purpose of averaging, each grade shall be weighted in the following manner:

A–	4 x semester hours = index points
B–	3 x semester hours = index points
C–	2 x semester hours = index points
D–	1 x semester hours = index points
E,F,WF,IF–	0 x semester hours = index points
P,N,I,PI,W,WN,IN	not included

REQUIREMENTS FOR DEGREES

ASSOCIATE DEGREE

To earn an associate degree, a student shall satisfy the following:

- The completion, either by Purdue course work, as directed credit, or by credit accepted from another institution, of the plan of study underlying the degree. Deans of schools may refuse to accept as credit toward graduation any course which was completed 10 or more years previously. Former students shall be notified immediately of all such decisions upon re-entering. Waivers or substitutions may be made by the school conferring the degree.
- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. Students are normally expected to complete the entire second year in residence; however, with approval by the school concerned, students who have at least three semesters of resident study may complete not to exceed 16 semester hours of the second year, in another approved college or university. For the purpose of this rule, two summer sessions may be considered as equivalent to one semester.

- Registration, either in residence or in absentia, as a candidate for the desired degree during the semester (or summer session) immediately preceding its conferment.
- A minimum graduation index of 2.00 shall be required for graduation.

A student who has completed all other requirements for an associate degree, but has failed to meet the quality requirements may register for additional courses with the approval of an authorized representative of the dean of the school after a review of the student's record. The additional courses which the student may take after meeting all quantity requirements shall not exceed 10 credits. Credit in these additional courses must be established within three years of the date on which all degree requirements except the minimum graduation index were met. The student will be considered as having met the quality requirement for graduation if the student's graduation index, including the above extra courses, meets the quality standard in effect at the time when all other graduation requirements were satisfied.

BACCALAUREATE DEGREE

To earn a baccalaureate degree from Purdue University, a student shall satisfy the following requirements:

- The completion, either by resident course work, as directed credit, or by credit accepted from another institution, of the plan of study underlying the degree. Deans of schools may refuse to accept as credit toward graduation any course which was completed ten or more years previously. Former students shall be notified immediately of all such decisions upon re-entering. Waivers or substitutions may be made by the school conferring the degree.
- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level courses. Students are normally expected to complete the senior year in residence; however, with approval by the school concerned, a student who has had four semesters of resident study may complete the last year or a portion of it at another college or university, provided that the number of semester credit hours to be taken does not exceed 25 percent of the total credit hours required for the degree. The foregoing stipulations do not apply to students who earn credit elsewhere through a contract or arrangement entered into by the University or one of its academic units.
- Registration, either in residence or absentia, as a candidate for the desired degree during the semester (or summer session) immediately preceding its conferment.
- A minimum graduation index of 2.00 shall be required for graduation. Some teacher education programs require minimum indexes higher than 2.00.

A student who has completed all other requirements for a baccalaureate degree, but has failed to meet the quality requirements may register for additional courses with the approval of an authorized representative of the dean of the school after a review of the student's record. The additional courses which the student may take after meeting all quantity requirements shall not exceed 20 credits. Such a student may take in another approved college or university not more than nine of the 20 credits permitted, provided such courses are approved in advance in writing by an authorized representative of the dean of the student's school. A copy of such approval must be filed in the Office of the Registrar. Credit in these additional courses must be established within five years of the date on which all degree requirements except the minimum graduation index were met. The student will be considered as having met the quality requirement for graduation if the student's graduation index, including the above extra courses, meets the quality standard in effect at the time when all other graduation requirements were satisfied.

ADVANCED DEGREES

Requirements for the several master's degrees, for the Educational Specialist, and for Doctor of Philosophy degrees are established by the Graduate Council and are stated in the Graduate School Bulletin and the regulations of the Graduate School. In general, these requirements include the following:

- The filing of an appropriate plan of study for the advanced degree, and the approval of that plan by the department or school head, the school dean, and the dean of the Graduate School.
- The demonstration of proficiency in English prior to filing the plan of study.
- The completion of a substantial portion of the plan in residence, as described in the bulletin. Course credits earned by a student whose graduate study has been inactive for five years or more are normally excluded.
- The completion of a thesis for all doctoral degrees and for thesis-option master's degrees.
- Successful completion of such written and/or oral examinations specified by the various schools and departments.

MULTIPLE DEGREES

Upon special request approved by the deans of the schools concerned and filed with the Registrar at the beginning of the final semester (or summer session), a student may be registered as a candidate for more than one degree.

MEETING DEGREE REQUIREMENTS

Specific deadlines for the various requirements for graduate degrees are outlined in the Graduate School Bulletin and must be met as specified. All degree requirements for undergraduate and professional degrees are to be met as of the end of the academic session in which the degree is to be conferred. In the event

that academic requirements for an undergraduate or professional degree have not been met as of the end of the session, the candidate s school may grant an extension of time, not to exceed 30 calendar days following the end of the session, for these requirements to be completed in order for the degree to be conferred for that session.

Academic requirements which have not been completed, as of the end of the 30-day period, shall disqualify the student from receiving the degree in the intended session and shall delay the conferring of the degree until the end of the next session in which the student is duly registered and all degree requirements have been completed.

SCHOLASTIC PROBATION

A student shall be placed on probation if the student s semester or graduation index at the end of any regular semester is less than that required for a student with a classification as shown in Table A below.

A student on probation shall be removed from that status at the end of the first subsequent semester in which the student achieves semester and graduate indexes equal to or greater than those required for a student with a classification as shown in Table A.

Any grade change due to reporting error will result in a recalculation of the index and determination of probation status.

TABLE A. INDEX LEVELS FOR PROBATION		
S = Semester Index; G = Graduation Index		
Classification	S	G
0 and 1	1.5	1.5
2	1.5	1.6
3	1.6	1.7
4	1.6	1.8
5	1.7	1.9
6	1.7	2.0
7	1.7	2.0
8 and up	1.7	2.0

**DROPPING OF STUDENTS
FOR SCHOLASTIC DEFICIENCY**

A student on scholastic probation shall be dropped from the University if at the close of any semester in which the student’s graduation index is less than that required in Table B or if the student receives six credits or more of failing (F) grades for the semester. This rule shall not apply for the semester in which the student completes all requirements for a degree. A student dropped by this rule and later duly readmitted as a regular student shall be readmitted on probation.

TABLE B. INDEX LEVELS FOR DROPPING	
G = Graduation Index	
Classification	G
0 and 1	1.3
2	1.4
3	1.5
4	1.6
5	1.7
6	1.8
7	1.9
8 and up	2.0

Applications for readmission to the University from students who have been dropped for academic reasons must be accompanied by a check or money order, not cash, for \$50 made payable to Purdue University. Processing of the application will not begin until the fee is paid. Applications may be obtained from the Registrar’s Office.

SCHOLASTIC RECOGNITION

Chancellor’s List. At the conclusion of each semester, the registrar shall indicate which undergraduate students are scholastically eligible to be included on the Chancellor’s List. To be cited on the Chancellor’s List for any one semester, a student must:

- Have at least 12 credits included in the graduation index.
- Have at least 6 hours included in the semester index.
- Attain at least a 3.5 graduation index.
- Have at least a 3.0 current semester index.

Semester Honors. At the conclusion of each semester, the registrar shall indicate which undergraduate students are scholastically eligible for Semester Honors. To be cited, a student must:

- Have at least 6 credits included in the semester index.
- Attain at least a 3.5 semester index.
- Have at least a 2.0 graduation index.

DEGREES WITH DISTINCTION

Degrees are awarded at the end of each semester and summer session to candidates who have completed the requirements of their schools. At each of these periods, degrees with distinction are awarded to those completing the undergraduate plans of study under the following general University rules:

- A candidate for the baccalaureate with distinction must have earned at least 65 hours of credit at Purdue. A candidate for an associate degree with distinction must have earned at least 35 hours of credit at Purdue. To qualify for distinction, the student's graduation index for all work completed must be at least 3.30.
- The minimum graduation index for graduation with distinction in each school shall be no less than the 90th percentile of the graduation indexes of the graduates in each school, for the spring semester, provided that the index is at least 3.30. The minimum graduation index so determined in the spring for each school shall be applied for graduation with distinction for the subsequent summer session and fall semester.
- Of those graduates who qualify for distinction under these rules for the spring semester, the three-tenths of the baccalaureate graduates having the highest graduation indexes shall be designated as graduating with highest distinction, irrespective of the schools from which they graduate. The three-tenths of the spring associate degree graduates having the highest graduation indexes will be designated as graduating with highest distinction.

The minimum graduation indexes so determined for graduation with highest distinction shall be applied for graduation with highest distinction for the subsequent summer session and fall semester.

STUDENT SERVICES

DEAN OF STUDENTS OFFICE

The staff of the Dean of Students Office, Room 103 of the Library-Student-Faculty Building, offers services in the following areas:

Personal Counseling. Short-term, confidential individual counseling is available, free of charge, for a variety of personal problems. Referral to outside services is available as deemed necessary and appropriate.

Career Counseling. Assistance is available for individuals who have not clarified their immediate or long-range vocational goals, or are dissatisfied with their present majors in college.

Educational Counseling. Services are provided to students experiencing difficulty in their academic work. Help with study techniques, scheduling of study time and other problems related to academic performance are offered. The office also provides advisors for students who have not established career objectives.

Testing. Individual tests relating to aptitude, personality, mental ability and career interest are available on request. Also, a specially developed test battery is available for both enrolled and non-enrolled students. A fee is charged.

Computer-based Career Assessment. Discover, a computerized career guidance program, contains the latest occupational and educational information to assist students in career planning. This service is free to enrolled students.

ACADEMIC ADVISING

Upon admission to the University, each student is assigned an academic advisor who is available to provide information on policies, procedures and programs and services of the University. The advisor also will assist students in exploring educational and career objectives. In addition, students will be informed of the wide range of educational opportunities at the University pertinent to their objectives.

STUDENT SUPPORT SERVICES (sSs)

Funded by the U.S. Department of Education, sSs is designed to assist low income, first-generation college students and students with disabilities to maximize their academic potential and achieve their academic goals. A professionally trained staff provides academic and personal support including counseling, assistance in obtaining financial aid, diagnostic testing, test interpretation, assistance in development of an appropriate plan of study, orientation to college, remedial and developmental work, educational, and academic counseling. Students with disabilities are assisted in making arrangements which will allow them to enjoy full access to the educational opportunities of the University.

For more information or to apply for sSs, a student need only contact the sSs Office, located in Room 21 of the Library-Student-Faculty (LSF) Building. The necessary forms and instructions are available to any interested individual. Validation of eligibility will be required at the time of application to the program. Staff members are available to consult with students regarding eligibility and services.

CHILD CARE

The Little Boilermaker Child Care Center, located in Room 135 of the Library-Student-Faculty Building, provides convenient, high-quality care for the children of students, faculty, and staff members. The Center offers a variety of activities for children, enabling them to explore various activities and interests. Children between the ages of 2 and 9, provided they are toilet trained, are eligible to participate in the program. Prior to using this service, a parent must complete all enrollment forms and purchase a child care fee sheet. More information is available at the Child Care Center or from the Dean of Students Office.

STUDENT ACTIVITIES/ATHLETICS OFFICE

Recognizing the diverse student population on campus, this office provides numerous opportunities to accommodate the interests of the student body. Student participation is encouraged in planning activities, and students are asked to express their needs and desires.

Activities and Events. Throughout the year, programs of entertainment, cultural and educational value are held for the benefit of the students. Some are sponsored by the Student Government or other organizations; others are sponsored by the Chancellor and by the Student Activities/Athletics office. Most of these programs are free and many are open to the public.

Student Organizations. A number of student organizations are active, many of which were formed in response to student interest or request. Some clubs extend student involvement in their academic major; others promote social, political, community or spiritual interests. The Student Government is quite active, composed of representatives elected by the student body each spring. *The Spectator*, a student-operated newspaper, is published periodically during Fall and Spring semesters.

Recreation. A comprehensive package of recreational activities includes intramural sports, fitness activities, outdoor recreation and special events. Campus facilities for recreation include tennis/basketball courts, Fitness Center, locker rooms, a baseball/intramural complex, a walking/jogging trails and an indoor game room.

Sports. Purdue University North Central belongs to the National Association of Intercollegiate Athletics (NAIA) and the Chicagoland Collegiate Athletic Conference, fielding men's baseball and basketball teams. In addition, women's soccer and women's softball teams compete at the club sport level. Additional club sports programs can be started if sufficient student interest exists. A cheerleading squad supports athletics and other campus activities.

HONOR SOCIETIES

Alpha Sigma Lambda. This national honor society for nontraditional/adult students recognizes the academic achievements of those who continue their higher education while facing competing interests of family, community and work.

Beta Beta Beta. Dedicated to improving the understanding and appreciation of the biological sciences, this national honor society has chapters at 380 colleges and universities.

Student chapters of these professional engineering societies are associated with the Technology/Engineering Club: American Society of Mechanical Engineers, Institute of Industrial Engineers and Institute of Electrical and Electronics Engineers.

FACILITIES TO ASSIST LEARNING

Library. Located on the second floor of the Library-Student-Faculty Building, the library provides open stacks of books, interlibrary loan, reference and bibliographic collection, periodicals, audiovisual equipment and many other services. Computers link students to reference sources around the world. Rooms are available for group study or viewing videotapes.

Computer Lab. The main computer lab for student use is Room 265, Technology Building. Access from this lab includes more than 100 terminals with a variety of software, e-mail and internet connections. Students also may arrange to use computers in special areas around campus such as the Macintosh lab, the CAD labs, Nursing Media Center and the Library.

Learning Center. Students can drop in to improve their understanding of various academic disciplines through computer tutorials, videotapes and other learning supplements. There also are study tables for individual and group learning, as well as facilities for taking courses via satellite. The professional staff proctors approved makeup exams and students should always schedule appointments for these tests. The Learning Center is located in Room 157, Technology Building.

Nursing Media Center. Students will have access to computers with clinical simulation software, including one interactive programs, as well as TV-VCRs for viewing clinical videos. The media center is adjacent to the nursing laboratories on the third floor of the Technology Building.

Writing Center. Peer tutoring and other resources for grammar, spelling, punctuation and other writing skills are available in this center, located in Room 359, Technology Building.

Tutors. Tutoring is available in selected courses. Students should ask their instructors and/or academic advisors about the availability of tutoring. Tutoring also is offered through Student Support Services and the Writing Center.

PLANS OF STUDY

The following pages present first those programs that can be completed at the North Central campus. These include bachelor s degree programs in nine majors, 11 associate degree programs, one master s degree and other selected graduate offerings. All degrees, with the exception of those in Business, are offered under the jurisdiction of the appropriate schools on the West Lafayette campus of Purdue University. The curricula for Business is governed by the Faculty of Purdue University North Central.

In addition to degrees offered on campus, students may begin study at Purdue University North Central in almost any subject matter area offered on any campus of Purdue University or other major American university. In general, the transfer program listings outline the first two years of work appropriate for transfer to one of the academic units on another Purdue University campus. Programs especially tailored to meet the requirements of other universities will usually be constructed so that students may take up to two years of course work at the North Central campus.

Course requirements vary among different major programs. Course sequencing may vary among individual students. **Consult your academic advisor for guidance.**

Not all courses listed in the following plans of study are offered at Purdue University North Central, nor are all offered every semester. Some courses may have to be taken at one of the other campuses of Purdue.

Plans of study for degrees in this bulletin are specific to the Purdue University North Central campus. Program and course requirements may vary from campus to campus. Therefore, it is the student s responsibility to investigate these variances in degree requirements prior to making a campus transfer.

ABBREVIATIONS

The following abbreviations of subject fields are common to all University bulletins concerned with academic programs. They are used in the plans of study and descriptions of courses sections of this bulletin.

ANTH	Anthropology	GNC	Developmental Studies
A&D	Art & Design	GBA	Accounting
ART	Architectural Technology	GBG	Business
ASTR	Astronomy	GBI	International Business
BCHM	Biochemistry	GBM	Marketing
BCM	Building Construction Management	GNT	General Studies: Technical Writing
BIOL	Biological Sciences	GS	General Studies
BTNY	Botany/Plant Pathology	HIST	History
CDFS	Child Development & Family Studies	H&S	Health Science
CET	Civil Engineering Technology	IDIS	Interdisciplinary Studies
CGT	Computer Graphics Technology	IET	Industrial Engineering Technology
CHM	Chemistry	MA	Mathematical Sciences
CIMT	Computer-integrated Manufacturing Technology	ME	Mechanical Engineering
CPT	Computer Technology	MET	Mechanical Engineering Technology
CS	Computer Sciences	MGMT	Management
COM	Communication	MUS	Music
EAS	Earth and Atmospheric Sciences	NUR	Nursing
ECON	Economics	OLS	Organizational Leadership & Supervision
EDCI	Educational Curriculum & Instruction	PCTX	Pharmacology
EDFA	Educational Foundations & Administration	PE	Physical Education (Health, Kinesiology & Leisure Studies)
EDPS	Educational Psycho-Educational Studies	PHIL	Philosophy
EE	Electrical Engineering	PHYS	Physics
EET	Electrical Engineering Technology	POL	Political Science
ENGL	English	PSY	Psychological Sciences
ENGR	Engineering	SOC	Sociology
FLL	Foreign (General) Languages & Literature	SPAN	Spanish
F&N	Foods and Nutrition	STAT	Statistics
FNR	Forestry & Natural Resources	THTR	Theatre
FR	French		
GER	German		

THE BACHELOR OF SCIENCE DEGREE

The Engineering and Technology Division provides career-based educational opportunities to students whose technological interests and aptitudes are essentially application-oriented. Graduates of engineering technology bachelor's degree programs are called engineering technologists. The engineering technologist is typically a practical person, interested in applying engineering principles as well as organizing people for industrial production, construction or operation, or in the improvement of devices, processes, methods, or procedures.

The baccalaureate program provides the appropriate technical course work, communication and humanistic-social studies to prepare graduates for employment and excellent career growth.

THE ASSOCIATE OF SCIENCE DEGREE

The Associate of Science degree is awarded after two years of university-level study in an applied scientific field. Graduates of such programs are called technicians. The engineering technician is an important, practical person with a sound understanding of scientific principles of testing, measuring devices, and of practical techniques. Students receive a solid technical foundation, which will enable them to adapt readily to a wide variety of employment opportunities.

Students who have completed the requirements for the associate degree in one of the available curricula may be admitted to a baccalaureate program offered. Alternatively, the associate degree holder may be admitted to a junior/senior year curriculum at another Purdue campus leading to the bachelor's degree in the same field as the associate degree.

CERTIFICATES

Certificates can be earned in several fields when a student wants to update professional skills without undertaking a degree program. In most cases, credits will apply toward an associate or bachelor's degree if the student elects to continue.

BACHELOR OF SCIENCE DEGREE IN COMPUTER INFORMATION SYSTEMS TECHNOLOGY

Please check Purdue North Central's website for changes to the curriculum since the printing of this catalog.

The computer technology program at the North Central campus is offered in conjunction with the School of Technology of Purdue University at West Lafayette. It prepares students for professional careers in business data processing and computer information systems.

The Bachelor of Science (B.S.) degree in Computer Information Systems Technology (CIST) enables students to participate in the information technology workforce with skills necessary to design, operate, and manage complex computer applications and services in business and industry. Additionally, it prepares currently employed information technology professionals to advance in their careers through increased skill and knowledge in their field.

Information technology workers include systems analysts who identify business requirements and design appropriate information system solutions, database administrators who organize and manage the corporate data resources, network administrators, web site developers, and application programmers who write, test, and maintain software to fulfill business requirements. The CIST degree provides educational experiences to produce these types of information technology professionals.

Graduates of this program can expect to find employment in manufacturing, financial, retail, consulting, and government sectors of the economy. Demand for information technology workers has never been greater; a nationwide shortage of information technology professionals currently exists. With the baccalaureate degree, graduates can expect to see their opportunities for advancement increase within large, medium-sized, or small corporations.

The Associate of Science (A.S.) degree in Computer Technology (CPT) prepares students for a career in business data processing and computer information systems.

Graduates are prepared for entry-level positions including applications programmer, personal computing specialist, help desk operator, technician, and computer operator. The curriculum is designed to allow students to immediately articulate from the A.S. degree program in Computer Technology to the B.S. degree program in Computer Information Systems Technology.

A.S. degree graduates also may continue toward a bachelor's degree in organizational leadership and supervision at Purdue University North Central. Students in this program may choose a computer technology emphasis.

Bachelor s Degree Requirements-System Integration Option

Please check Purdue North Central s website for changes to the curriculum since the printing of this catalog.

JUNIOR YEAR

Fall Semester

3	CPT 350	Object-Oriented Programming
3	CPT 380	Requirements Discovery and Modeling
3		Free Elective ⁷
3		Professional Speaking Selective ⁸
<u>3</u>		Interdisciplinary Selective ⁹
15		

Spring Semester

1	CPT 310	Career Planning Seminar
3	CPT 372	Database Development
3	CPT 385	Advanced Design Techniques
3		Professional Writing Selective ¹⁰
3		Interdisciplinary Selective ⁹
<u>3</u>		Liberal Arts Elective ¹¹
16		

SENIOR YEAR

Fall Semester

3		Systems Integration Selective ¹²
3		Technology Selective ¹³
3		Liberal Arts Elective ¹¹
3		Interdisciplinary Selective ⁹
<u>3</u>		Interdisciplinary Selective ⁹
15		

Spring Semester

3	CPT 480	Managing Information Technology Projects
3		Technology Selective ¹³
3		Liberal Arts Selective ¹¹
3		Interdisciplinary Selective ⁹
<u>3</u>		Interdisciplinary Selective ⁹
15		

Note: a minimum grade of C is required in a prerequisite CPT course before moving on to its postrequisite courses(s). A student may only take a CPT course a maximum of three times, including withdrawals. A minimum grade point average of 2.00 calculated for all CPT courses is required for graduating with any CPT degree. Only those courses shown below in bold are offered at the North Central campus. However, they may not be offered each semester.

7 With the exception of remedial courses any course may fulfill this free elective requirement.

8 **COM 315, COM 320, COM 325, COM 415, OLS 474, COM C223, COM C380**

9 Students must **select** one course from each of the following interdisciplinary areas. Students may petition for alternate sequences through the CPT Appropriate Curriculum Committee. The course sequence must represent a problem area to which computing can be applied.

Interdisciplinary Area	Selective Courses		PNC Course to Use
Business Law:	MGMT 354 MGMT 455 BUS L203	Legal Foundation for Business I Legal Background for Business I Commercial Law	GBG 260
Finance:	IT 451 MGMT 201 MGMT 310 IT 450 BUS A202	Monetary Analysis for Industrial Decisions Managerial Accounting Principles of Finance Production of Cost Analysis Introduction to Managerial Accounting	IET 451 MGMT 201 GBG 333
Manufacturing:	CIMT 243 MET 451 CIMT 400 IE 477 IT 345	Automated Manufacturing I Manufacturing Quality Control Computer-Integrated Manufacturing Work Methods and Measurements Automatic Identification and Data Capture	CIMT 243 MET 451
Marketing:	MGMT 323 MGMT 324	Introduction to Marketing Analysis Marketing Management	GBM 329
Organizational Behavior and Human Resources:	COM 324 OLS 375 OLS 376 OLS 477 OLS 486 PSY 372 OLS 351 OBHR 300 OBHR 330	Intro. to Organizational Communication Training Methods Human Resources Issues Conflict Management Management of Change Introduction to Industrial Organizational Psychology Innovation and Entrepreneurship Management of Human Resources Organizational Behavior	COM 324 OLS 375 OLS 376 OLS 477 OLS 486 PSY 372
Quality Control:	MET 451 OLS 484 CIMT 451 IT 342	Manufacturing Quality Control Leadership Strategies for Quality & Productivity Manufacturing Quality Control Introduction to Statistical Quality	MET 451 OLS 484

- 10 ENGL 420, ENGL 421, ENGL 424, TCM 220, ENGL W231, ENGL W321, ENGL W350, BUS X204
- 11 Courses must be selected from the following departments: Anthropology, Art & Design, Classics, Communications, Economics, Education, English, History, Interdisciplinary Studies, Modern Languages, Music, Philosophy, Political Science, Psychology, Sociology, Theater, and the following courses in Child Development and Family Sciences: 211, 255, 432, 201(2 credits), 301(2 credits), or 430
- 12 CPT 499R- Enterprise Resource Planning Applications, CPT 499-IT Procurement, TECH 552 Information Technology Project and Process Management, TECH 581B Business Process Redesign
- 13 CPT 361 Software Redesign Using COBOL, CPT 475 Electronic Commerce and Business Implementation, CPT 392 Databade Design and Implementation, CGT 256 Human Computer Interface Theory and Design, CPT 450 Enterprise Application Development, CPT 488 Data Warehousing, IT 345 Automatic Identification and Data Capture

**Associates Degree Requirements-Applies to all
Bachelors Degree options**

*Please check Purdue North Central s website for changes to the curriculum
since the printing of this catalog.*

FRESHMAN YEAR

Fall Semester

3	CPT 141	Internet Foundations, Technologies and Development
3	CPT 172	Introduction to Application Development
3	MA 223	Introductory Analysis I (Calculus I)
3	ENGL 101	English Composition I
<u>3</u>		General Business Selective ¹
15		

Spring Semester

3	CPT 155	Introduction to Computer Programming
3	CPT 176	Information Technologies and Architectures
3	MA 224	Introductory Analysis II (Calculus II) ^a
3	ENGL 102	English Composition II
<u>3</u>	OLS 252	Human Relations in Supervision
15		

a, 1 See following page for footnote.

SOPHOMORE YEAR

Fall Semester

3	CPT 255	Programming for the Internet
4	CPT 276	Systems Software and Networking ^b
3	COM 114	Fundamentals of Speech Communication
3		Problem Solving Selective ^{2,c}
<u>3</u>		Economics Selective ^{3,d}
16		

Spring Semester

3	CPT 272	Database Fundamentals
3	CPT 280	Systems Analysis and Design Methods
3		Statistics Selective ^{4,e}
3		Accounting Selective ^{5,f}
<u>3</u>		Communications Selective ⁶
15		

Note: a minimum grade of *C* is required in a prerequisite CPT course before moving on to its postrequisite courses(s). A student may only take a CPT course a maximum of three times, including withdrawals. A minimum grade point average of 2.00 calculated for all CPT courses is required for graduating with any CPT degree. Only those courses shown below in bold are offered on the North Central campus. However, they may not be offered each semester.

- a Students pursuing any B.S. degree in Computer Technology must take **MA 224**. Terminal A.S. degree students may use a free elective here.
- b Students pursuing a B.S. degree in Computer Technology with the Telecommunications Option must take CPT 230 instead of **CPT 276**. All other B.S. degree options require **CPT 276**. Terminal A.S. degree students may use either **CPT 276** or **CPT 230**.
- c,d,e,f Students pursuing a B.S. degree in Computer Technology with the Telecommunications Option must take all of the following courses in place of those referenced by the designated letters: (**PHYS 220** or PHYS 218)^c, **EET 214**^d, (**PHYS 221** or PHYS 219)^e, and EET 233^f. All other B.S. degree options and terminal A.S. students may substitute any of these courses in place of their reference course.

1 **IET 104**, IT 104, BUS W100, BUS X100
2 **CHEM 111**, **CHEM115**, **PHYS 152**, **PHYS 220**, PHIL 120, PHIL 150, PHYS 218, CHEM C101, PHIL P150, PHIL P162
3 **ECON 210**, **ECON 251**, **ECON 252**, AGECEC 217, ECON E103, ECON E104, ECON E201, ECON E202
4 **STAT 225**, **STAT 301**, STAT 433, STAT 501, STAT 511, ECON E270, MA K310, STAT K 310
5 **MGMT 200**, MGMT 190, BUS A201
6 **COM 314**, **COM 315**, **COM 320**, **COM 415**, **COM 491**, COM 210, SPCH C281, SPCH S122, SPCH S223, SPCH S229

COMPUTER TECHNOLOGY CERTIFICATE

Purdue University North Central offers a certificate program in computer technology for persons who have earned either an associate or baccalaureate degree and who wish to develop basic expertise in computer programming, the Internet, and microcomputer applications. Degreed students who have established credit in a mathematics course equivalent to MA 154 and who have not received a degree in Computer Technology (CPT), Computer Information Systems Technology (CIS), or Computer Science (CS) may take advantage of this program.

The certificate program teaches the practical application of computer information systems, emphasizing their design and implementation. In addition, the certificate program provides a foundation in web design, microcomputer applications and Internet programming.

CORE COURSES (25 credit hours)

3	CPT 141	Internet Foundations, Technologies, and Development
3	CPT 155	Introduction to Computer Programming
3	CPT 172	Introduction to Application Development
3	CPT 176	Information Technology Architectures
3	CPT 255	Programming for the Internet
3	CPT 272	Database Fundamentals
4	CPT 276	Systems Software and Networking
3	CPT 280	Systems Analysis and Design Methods

SELECTIVE (3 credit hours)

As approved by advisor from one of the following disciplines:
CPT, OLS, IET, MET, EET, CS, CIMT or MA

PROGRESSION REQUIREMENTS

Students must earn a grade of C or better in any prerequisite CPT course in order to enroll in a post-requisite CPT course. A course may be repeated only three times, including withdrawals. An incomplete is not considered a passing grade. The pass/not pass option is not available for this certificate program.

A minimum grade point average of 2.00 calculated for all CPT core courses is required for graduating with a certificate in Computer Technology.

Total credits required for certificate: 28. Credit may be given for prior course work; however, a minimum of 21 credit hours must come from a Purdue University campus.

BACHELOR OF SCIENCE DEGREE IN MECHANICAL TECHNOLOGY

Accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET) 111 Market Place, Suite 1050, Baltimore, MD 21202, Telephone: (410)347-7700.

Mechanical technology includes the integration of methods, materials, machinery, and human resources found in today's modern industries. Scientific, engineering, and manufacturing principles are applied to the following technical areas: design and development; manufacturing and production; quality control and cost analysis; the generation, transmission, and utilization of mechanical energy, fluid energy, and thermodynamic energy.

Graduates of the mechanical engineering technology program, described in the Associate Degree section, are eligible to enter into this two-year capstone curriculum, offered at the North Central campus in conjunction with the School of Technology of Purdue University at West Lafayette. The B.S. program prepares graduates for technical positions in manufacturing and production industries. Technologists fill a wide variety of industrial positions in manufacturing, production, supervision, plant operations, and product development.

The primary goal of the curriculum is to provide all graduates with a solid technical foundation which will enable them to adapt readily, and grow into a wide variety of employment opportunities.

General Plan of Study: Mechanical Technology

Upper division MET courses are offered on a two-year cycle.

Purdue University North Central's Mechanical Engineering Technology associate degree plan of study can be found on page 49.

JUNIOR YEAR

Fifth Semester

3	MET 320	Applied Thermodynamics
3	CPT 175E	Visual Programming
3	ECON 210	Principles of Economics
3	MA 224	Introductory Analysis II
<u>3</u>	CHM 111	General Chemistry
15		

Sixth Semester

3	MET 313	Applied Fluid Mechanics
3	ENGL 102	English Composition II
3	STAT 301	Elementary Statistical Methods
3	Basic Science or Interdisciplinary Elective	
<u>3</u>	Mechanical Engineering Technology Elective	
15		

SENIOR YEAR

Seventh Semester

3	MET 344	Materials II
3	MET 382	Controls and Instrumentation for Automation
3		Communications Selective
3	Humanities or Social Science Elective	
<u>3</u>	Mechanical Engineering Technology Elective	
15		

Eighth Semester

3	MET 400	Mechanical Design
3	IET 451	Monetary Analysis for Industrial Decisions
3	ENGL 421	Technical Writing
3	Mechanical Engineering Technology Elective	
<u>3</u>	Organizational Leadership and Supervision or Management Elective	
15		

ELECTIVES

INTERDISCIPLINARY

300 or 400 level courses in EET, Engineering, CS, IET
Basic Science, Chemistry, Mathematics, Physics, Statistics that extends
beyond required courses.

SOCIAL SCIENCE/HUMANITIES

English, History, Philosophy, Anthropology, Sociology, Psychology,
Economics, Political Science. Excluded: ROTC, Band, Education.

OLS/MANAGEMENT

Any Management or OLS course.

MECHANICAL ENGINEERING TECHNOLOGY

300/400 level MET courses which are not required

Communications Selective, COM 315 or COM 415

Total credits required for baccalaureate degree: 127

**ASSOCIATE OF SCIENCE DEGREE
IN MECHANICAL ENGINEERING TECHNOLOGY**

Accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202, Telephone: 410-347-7700.

This program of study is designed to prepare students for employment in manufacturing and production industries. Emphasis is on the generation, transmission, and utilization of mechanical and fluid energy for the purpose of design and production of tools, machines, and their products. Graduates accept jobs in laboratories, engineering departments, plant maintenance, production departments, and technical sales. The promotion to positions such as industrial supervisors, machine and tool designers, technical buyers, production expeditors, and cost estimators is possible with additional industrial expertise.

Upon completing the associates degree, many students continue their education and complete the Bachelor of Science Degree in Mechanical Technology, since the plan of study for the associate degree constitutes the first two years of the four year bachelor s degree program.

General Plan of Study: Mechanical Engineering Technology

FRESHMAN YEAR

First Semester

3	MET 141	Materials I
1	MET 162	Computational Analysis Tools in MET
3	CGT 110	Computer Graphics Communications
3	ENGL 101	English Composition I
3	MA 153	Algebra and Trigonometry I
<u>3</u>	Humanities or Social Science Elective	
16		

Second Semester

3	MET 111	Applied Statics
3	MET 142	Manufacturing Processes I
3	CGT 290	Computer-Aided Drafting and Design
3	MA 154	Algebra and Trigonometry II
<u>3</u>	COM 114	Fundamentals of Speech
15		

SOPHOMORE YEAR

Third Semester

4	MET 211	Applied Strength of Materials
3	MET 213	Dynamics
3	MET 230	Fluid Power
3	MET 242	Manufacturing Processes II
3	MA 223	Introductory Analysis I
<u>4</u>	PHYS 220	General Physics I
20		

Fourth Semester

3	MET 102	Production Design and Specifications
3	MET 214	Machine Elements
3	MET 220	Heat / Power
4	PHYS 221	General Physics II
<u>3</u>	EET 214	Electricity Fundamentals
16		

ELECTIVES

SOCIAL SCIENCE/HUMANITIES

English, History, Philosophy, Anthropology, Sociology, Psychology, Economics, Political Science. (Excluded: ROTC, Band, Education)

Total credits required for associate degree: 67

**MECHANICAL ENGINEERING
TECHNOLOGY CERTIFICATE**

This certificate program is designed to respond to regional industrial needs for upgrading engineering department personnel in specific technical areas. The individual who is working in an engineering or an engineering certificate related area without benefit of a formal educational background will be brought to a high degree of specialization within a structured time period by utilizing only existing courses.

It is offered in conjunction with the School of Technology of Purdue University at West Lafayette. Upon completion, the participant will be awarded an appropriate occupational certificate. The program is divided into two segments:

REQUIRED SECTION (12 credits)

3	MET 141	Materials I
3	CGT 110	Computer Graphics Communications
3	CGT 290	Computer-Aided Drafting and Design
3	MA 153	Algebra and Trigonometry 1

BASIC SPECIALTY SECTION (12 credits)

This consists of four additional technical courses which are considered as basic to the particular engineering technology used in the student's employment department. These are selected jointly by the student, the student's supervisor and the academic advisor to strengthen a particular technical engineering area with the understanding that all course prerequisites have been met. The courses in this section will be chosen to build upon knowledge and experience which the student has gained from previous courses and from work experience.

The technical courses offered will be those at the 100 and 200 level which are appropriate for inclusion in an approved mechanical engineering technology associate degree program. Certain approved 300 level courses may also be elected providing prerequisite courses are completed.

Total credits required for certificate: 24

BACHELOR OF SCIENCE DEGREE IN ORGANIZATIONAL LEADERSHIP AND SUPERVISION

The baccalaureate program in organizational leadership was designed with the active assistance of business and industrial leaders. It is offered at the North Central campus in conjunction with the School of Technology of Purdue University at West Lafayette and provides a practical, people-oriented approach to the practice of leadership. It was established to meet the educational needs of:

- Individuals currently employed who desire to develop leadership skills
- Students that are majoring in fields which have limited job opportunities who desire to increase their employability by developing leadership as well as technical skills
- Graduates from associate degree programs who desire to continue their studies

The OLS curriculum prepares graduates for successful careers in business, education, retail, service, government, health care and industry/manufacturing. Depending upon how their coursework was structured, graduates may be working in positions such as management, human resources, training, accounting, customer service, field engineering, plant engineering, production or process control, purchasing, quality control, sales or technical writing.

Several degree options designed to meet a variety of interests are described in the section following the general plan of study. Specific plans of study can be obtained from advisors or clerical staff in the Technology/Engineering Section office. In addition, a variety of minors are available to meet specific needs. For further information, contact the academic advisors.

A 2.25 gradepoint average is required to transfer into this program.

REQUIRED COURSES (30 credits)

3	OLS 252	Human Behavior in Organizations
3	OLS 274	Applied Leadership
3	OLS 331*	Occupational Safety and Health
3	OLS 375	Training Methods
3	OLS 376	Human Resource Issues
3	OLS 378	Labor/Management Relations
3	OLS 487	Leadership Philosophy
3	OLS 494	Organizational Policy
3	OLS xxx*	Selective
3	OLS xxx*	Selective

OTHER REQUIRED COURSES (45 credits)

3	COM 114	Fundamentals of Speech Communication
3	COM 315	Speech Communication of Technical Information or
	COM 415	Discussion of Technical Problems
6	CPT 107	Computer Literacy or
	CPT 172	Introduction to Application Development or
	CPT 188S	Microcomputer Spreadsheet Applications or
	CPT 188W	Advanced Word Processing or
	CS 140	Introduction to Data Processing -Visual BASIC
3	ECON 210	Principles of Economics
3	CGT 110	Computer Graphics Communications or
	CPT Elective	
3	ENGL 101	English Composition I
3	ENGL 102	English Composition II
3	ENGL 420	Business Writing
3	IET 104	Industrial Organization
3	IET 250	Fundamentals of Production Cost Analysis
3	IET 262*	Motion Study and Work Methods
3	IET 266*	Work Measurement and Incentives
3	MA 153	Algebra and Trigonometry I
3	MA 154	Algebra and Trigonometry II
3	MGMT 200	Introductory Accounting
3	GBG 260	Business Law
3	STAT 301	Elementary Statistical Methods

* Course may have an allowable substitution per each student's Associate of Science degree. Contact the Technology/Engineering Department for a current plan of study for the degree.

ELECTIVES (49-50 credits)

- 6-8 Science Selectives+
- 21-24 Technical Selectives++
- 15-18 General Education Electives+++

General Plan of Study: Organizational Leadership and Supervision

This generic plan is primarily for those who have completed the Associate of Science degree in OLS. Students with an associate degree other than OLS should contact the Technology/Engineering Department office for a specific plan of study based on the degree earned.

FRESHMAN YEAR

First Semester

3	OLS 252	Human Behavior in Organizations
3	IET 104	Industrial Organization
3	ENGL 101	English Composition I
3	MA 153	Algebra and Trigonometry I
<u>3</u>	CPT Elective	
15		

Second Semester

3	OLS 274	Applied Leadership
3	COM 114	Fundamentals of Speech Communication
3	ENGL 420	Business Writing or
	ENGL 102	English Composition 102
3	MA 154	Algebra and Trigonometry II
3	Technical Elective++	
<u>3</u>	Elective	
18		

SOPHOMORE YEAR

Third Semester

3	OLS 376	Human Resource Issues
3	ECON 210	Principles of Economics
3	MGMT 200	Introductory Accounting
3	Science Selective+	
<u>3</u>	Non-Technical Elective	
15		

+, ++ See following page.
+++ Should contain material of a more advanced nature than that in a required or approved substitute course. Exceptions may be allowed for those who enter the B.S. OLS program with associate degrees from other recognized Purdue programs with consent of the department head.

Fourth Semester

3	OLS 331	Occupational Safety and Health
3	OLS 375	Training Methods
3	OLS Selective	
3	Technical Elective++	
<u>3</u>	Non-Technical Elective	
15		

JUNIOR YEAR

Fifth Semester

3	OLS 378	Labor/Management Relations
3	ENGL 420	Business Writing
3	STAT 301	Elementary Statistical Methods
<u>6</u>	Technical Electives++	
15		

Sixth Semester

3	COM 315	Speech Communication of Technical Information or
	COM 415	Discussion of Technical Problems
3	OLS Selective	
6	Technical Electives++	
<u>3</u>	Elective	
15		

SENIOR YEAR

Seventh Semester

3	OLS 487	Leadership Philosophy
3	IET 250	Fundamentals of Production Cost Analysis or
	IET 451	Monetary Analysis for Industrial Decisions
3	CGT 110	Computer Graphics Communications or
	CPT Selective	
3	OLS Elective	
3	Technical Elective++	
<u>3</u>	Elective	
18		

+ Science selectives from the following: Physics, Chemistry, Biology, Astronomy or Earth and Atmospheric Sciences.

++ Technical electives must be part of an integrated plan with two- and three-course sequences, and must contain material of a more advanced nature than that presented in a required, approved substitute or a previously taken selective course. The student should always consult his or her advisor, because course sequencing may vary. Courses from the following schools are acceptable as approved by the student's academic advisor: School of General Studies (GBA, GBM and GBG); Engineering; Management (ECON & MGMT); Technology (IET, MET, EET, CPT, CET, ART, BCM, CIMT).

Eighth Semester

3	OLS 494	Organizational Policy
3	IET 266	Work Measurement and Incentives
3	OLS Elective	
3	Science Selective+	
<u>3</u>	Elective	
15		

Total credits required for baccalaureate degree: 126

Business Emphasis

The primary objective of this program is the education and development of graduates who are career-ready for leadership roles in business, industry, and service agencies. It is a highly individualized, practical, real-world, people-oriented approach to the practice of supervision. One-on-one counseling enables the student to individualize his or her own program.

Two-thirds of the program is composed of required courses designed to provide necessary supervisory skills such as functional ability, planning, organizing, and controlling. The other one-third consists of electives chosen by the student from a broad range of technical subjects. This enables the student to acquire the technical knowledge he or she wants and needs to function effectively in a high technology society. Above all, the program is thoroughly practical.

Graduates are employed in areas such as supervision, personnel, training and development, customer service, field engineering, plant engineering, production control, production engineering, process engineering, programming, project engineering, purchasing, quality control, sales and technical writing.

An appropriate plan of study for this degree emphasis can be obtained from advisors or clerical staff in the Technology/Engineering Department office.

Computer Technology Emphasis

This program offers a plan of study that prepares students for professional careers in computer information systems and other computer applications. The program emphasizes basic concepts associated with computer-based business systems.

The primary objective is to teach state-of-the-practice undergraduate courses and curricula in applied computing (also known as computer information systems, business data processing, and applied computer science). The curriculum is designed to prepare graduates who:

+ Science selectives from the following: Physics, Chemistry, Biology, Astronomy or Earth and Atmospheric Sciences.

- Understand various computer and information technologies and know how to use them to create applied computer applications that provide competitive advantage to their users.
- Understand a wide variety of computer applications and the complex relationships between applications.
- Can design, develop, and implement functional and adaptable software to solve business problems.
- Can help end-users with modern computer technology to retrieve and organize their own information.
- Understand business organizations and functions so they can communicate effectively with end users of computing services.
- Can work effectively in team situations.
- Can communicate effectively, both orally and in writing, with both technical and non-technical audiences.

Graduates are prepared for employment in a wide variety of business, industrial, and consulting environments. Representative entry-level positions include applications programmer, programmer/analyst, personal computing specialist, marketing representative, database analyst, and information analyst.

Students taking computer technology courses must earn a grade of C or better in any prerequisite computer technology course in order to enroll in a postrequisite CPT course.

Electrical Engineering Technology Emphasis

The student who completes the plan of study for the electrical engineering technology (EET) associate degree is eligible for consideration for admission to this B.S. degree program in preparation for a position as a technologist, primarily in the manufacturing industries. The plan provides additional study in electrical engineering technology and courses that provide the background of related technical and non-technical topics that are essential in modern industry. The technologist ordinarily will deal with various components of an overall system designed and developed by engineers. Some become technical supervisors. The technologist's role evolved during the 1970s and 1980s and will continue to evolve in the coming decades as a technically trained "organizer-doer."

The Electrical Engineering Technology plan of study option offers a variety of elective courses so a student may elect to emphasize certain specialty areas such as automated testing, biomedical electronics, controls, microprocessors, analog and digital communications, local area networks, power systems, computers/digital electronics, and instrumentation. The specific courses advised for a given option depend on the student's background and interests. The number of courses advised (usually three to six) are enough to afford some degree of specialization. Students are required to study a variety of technical subjects to ensure maximum employability.

The primary goal of the department is to provide a solid technical foundation that will enable graduates to perform well in a wide variety of employment situations. The success of our graduates supports the appropriateness of this philosophy.

An appropriate plan of study for this degree emphasis can be obtained from advisors or clerical staff in the Purdue North Central Technology/Engineering Department office.

Human Resource Management and Development Emphasis

This curriculum was designed with the cooperation and advice of area human resource executives and is continually updated to meet changing needs of today's workplace. Students choosing this curriculum are preparing for new careers or are developing and updating skills for professional or managerial positions in the fields of personnel, training or organizational development. Graduates will be prepared to:

- Recruit, interview and hire job applicants.
- Administer compensation and benefits programs.
- Train and develop managers and employees.
- Build teams.
- Administer EEOC and Affirmative Action programs.
- Develop and restructure organizations.

The curriculum is designed to give students a deeper understanding of human beings—a quality vital for effectiveness in today's human resource field. Following the suggestions of human resource professionals, courses incorporate current developments in areas such as:

Compensation and Benefits	Employee Relations
Staffing	Human Resource Information Systems
Business Management	Employee Training and Development
Organizational Development and Restructuring	Federal Regulations Affecting the Workplace

The curriculum is planned to meet the needs of both full- and part-time students, with courses in the daytime and evening. It also is flexible enough to allow noncontinuous progress should the student be unable to take classes every semester.

Students working toward the bachelor's degree continue studies that emphasize the "human" element in human resources, as well as additional professional studies in current topics. This degree takes the equivalent of four semesters of full-time study beyond the associate degree, and offers increased opportunity for both professional courses and those from general University offerings.

For information on specific course requirements and a plan of study, contact an advisor or clerical staff member in the Purdue North Central Technology/Engineering Department office.

Industrial and Manufacturing Engineering Technology Emphasis

This major field of specialization is designed to develop technologists to support the problem-solving and decision-making functions in management and to prepare for planning and control, work method analysis, work measurements, robotics, CNC systems, quality assurance and controls, and systems and procedures analysis. Practical applications of production-oriented operations, research techniques, data processing, and computer fundamentals are stressed.

The industrial engineering technologist is often initially employed in the industrial or manufacturing engineering time study, quality control, production control or plant layout department. With increased experience the student may advance within the department, directly assisting a professional industrial engineer, or may become a production supervisor. This broad technical background, together with the human relations background and proficiency in engineering methods and mathematics, enables the industrial engineering technologist to take advantage of opportunities for advancement in many directions.

An appropriate plan of study for this degree emphasis can be obtained from the Technology/Engineering Department office.

**ASSOCIATE OF SCIENCE DEGREE IN
ORGANIZATIONAL LEADERSHIP AND SUPERVISION**

This program is offered at the North Central campus in conjunction with the School of Technology of Purdue University at West Lafayette. It is designed to meet the needs of individuals who wish to improve their skills as leaders or to expand their general education. Leaders work in a variety of organizations and in many different functional areas. Therefore, the curriculum is designed to allow students to select courses within specified categories, which best prepare them for the functional area and/or organization of their choice. Graduates of the program are eligible to continue toward a Bachelor of Science degree in organizational leadership and supervision.

TECHNICAL CORE (21 credits)

3	IET 104	Industrial Organization
3	OLS 252	Human Behavior in Organizations
3	OLS 274	Applied Leadership
3	OLS 375	Training Methods
3	OLS 376	Human Resource Issues
3	MA 153	Algebra and Trigonometry I
3	OLS 331	Occupational Safety and Health

COMMUNICATIONS (6 credits)

3	ENGL 101	English Composition I
3	COM 114	Fundamentals of Speech Communication

FUNCTIONAL/TECHNICAL (30 credits)

Recognizing that leaders work in various functional areas, each student will be expected to select one or more groups of courses that are designed to increase technical effectiveness on the job. On the following pages are examples of existing functional areas from which 30 credit hours are to be selected: OLS, Labor Relations, Human Resources, and IET. Other areas include: EET, MET, GBA, GBG, GBH, GBM, CPT, CGT, MA and STAT.

SUPPORTIVE (NON-TECHNICAL) (9 credits)

Each student should have a balanced educational experience. Therefore, non-technical courses are included in the program. With the approval of the academic advisor, the student may select from a wide range of courses. Some of the more typical courses considered applicable are listed below.

Typical supportive (non-technical) courses:

3	SOC 100	Introductory Sociology
3	PSY 120	Elementary Psychology
3	ENGL 420	Business Writing
3	COM 315	Speech Communication of Technical Information or
	COM 415	Discussion of Technical Problems

General Plan of Study: Organizational Leadership and Supervision

Course requirements and sequencing may vary among individual students. Consult your advisor for guidance.

FRESHMAN YEAR

First Semester

3	OLS 252	Human Behavior in Organizations
3	IET 104	Industrial Organization
3	ENGL 101	English Composition I
3	MA 153	Algebra and Trigonometry I
<u>3</u>		CPT Elective
15		

Second Semester

3	OLS 274	Applied Leadership
3	COM 114	Fundamentals of Speech Communications
3	ENGL 420	Business Writing or
	ENGL 102	English Composition II
3	MA 154	Algebra and Trigonometry II
3		Technical Elective+
<u>3</u>		Non-technical Elective
18		

SOPHOMORE YEAR

Third Semester

3	OLS 376	Human Resource Issues
3	ECON 210	Principles of Economics
3	MGMT 200	Introductory Accounting
3		Technical Elective+
<u>3</u>		Non-technical Elective
15		

Fourth Semester

3	OLS 331	Occupational Safety and Health
3	OLS 375	Training Methods
3		OLS Selective
3		Technical Electives+
<u>3</u>		Non-technical Elective
15		

Total credits required for associate degree: 63

+ Courses selected as technical electives must be part of an integrated plan with two- and three-course sequences, and should contain material of a more advanced nature than that presented in a required, or previously taken elective course. Courses from the following areas are acceptable as approved by your academic advisor: Organizational Leadership and Supervision: OLS; Business: GBA, GBH, GBM, and GBG; Engineering; Management: ECON and MGMT; Technology: IET, MET, EET, CPT, CET, ART, or BCM.

Human Resource Management and Development Option

This associate degree option offers a blend of professional and humanities courses leading to the broad-based education essential for today s human resource professional. The degree requires the equivalent of two semesters of full-time study beyond the certificate program.

The curriculum is designed to give students a deeper understanding of human beings — a quality vital for effectiveness in today s human resource field. Following the suggestions of human resource professionals, courses incorporate current developments in areas such as:

Compensation and benefits	Employee relations
Staffing	Federal regulations affecting the workplace
Business management	Human resource information systems
Employee training & development	Organizational development & restructuring

The curriculum is planned to meet the needs of both full- and part-time students, with courses in the daytime and evening. It also is flexible enough to allow non-continuous progress should the student be unable to take classes every semester.

CORE REQUIREMENTS (18 credits)

3	IET 104	Industrial Organization
3	OLS 252	Human Behavior in Organizations
3	OLS 274	Applied Leadership
3	OLS 375	Training Methods
3	OLS 376	Human Resource Issues
3	MA 153	Algebra and Trigonometry I

COMMUNICATIONS (9 credits)

3	COM 114	Fundamentals of Speech Communication
3	ENGL 101	English Composition I
3	ENGL 420	Business Writing or
	ENGL 102	English Composition II

FUNCTIONAL/TECHNICAL (12 credits)

3	OLS 331	Occupational Safety and Health
3	OLS 372	Staffing and Performance Appraisal
3	OLS 378	Labor/Management Relations
3	OLS 484	Leadership Strategies for Quality and Productivity

SUPPORTIVE - Non-Technical (12 credits)

3	PSY 120	Elementary Psychology
3	SOC 100	Introductory Sociology
3	Elective	
3	Elective	

SUPPORTIVE - Technical (12 credits)

3	CPT 107	Computer Literacy
3	CPT 188S	Spreadsheet Applications
3	CPT 188W	Advanced Word Processing
3	Elective	

Total credits required for associate degree: 63

+ Courses selected as technical electives must be part of an integrated plan with two- and three-course sequences, and should contain material of a more advanced nature than that presented in a required, or previously taken elective course. Courses from the following areas are acceptable as approved by your academic advisor: Organizational Leadership and Supervision: OLS; Business: GBA, GBH, GBM, and GBG; Engineering; Management: ECON and MGMT; Technology: IET, MET, EET, CPT, CET, ART, or BCM.

ORGANIZATIONAL LEADERSHIP CERTIFICATE

This is an intensive and practical curriculum intended to provide first line supervisors with the professional education needed to handle the technical problems which they encounter daily. Admission to the program is granted to those adults in management positions who meet certain entrance standards and requirements. Candidates may be admitted as degree or non-degree students. Specific questions concerning the program should be directed to the chairperson of the Technology and Engineering Department or to any organizational leadership and supervision faculty member on the North Central campus.

The program was developed by collaborating with representatives of industry and business. It is designed to meet the needs of the newly appointed manager. It is offered in conjunction with the School of Technology of Purdue University at West Lafayette. Course selection is on the basis of a program worked out with the academic advisor and is carefully tailored to individual needs.

REQUIRED COURSES (9 credits)

3	OLS 252	Human Behavior in Organizations
3	OLS 274	Applied Leadership
3	COM 114	Fundamentals of Speech Communication

CORE CURRICULUM (6 credits)

Two of the following three courses are required in the basic core curriculum:

3	OLS 331	Occupational Safety and Health
3	OLS 376	Human Resource Issues
3	OLS 378	Labor/Management Relations

ELECTIVES (9 credits)

Additional courses to make a total of 24 credit hours may be chosen in any approved combination.

Total credits required for certificate: 24

HUMAN RESOURCES CERTIFICATE

Working individuals and those contemplating a career in personnel or training who wish to explore the field before committing to a degree program can test the water by entering the certificate program. Designed to accommodate part-time and evening students, the curriculum consists of nine courses: eight in the supervision and management area and one in English composition.

This option of the organizational leadership and supervision program allows progression from certificate to Associate of Science degree and on, if the student wishes, to the Bachelor of Science degree. It is offered in conjunction with the School of Technology of Purdue University at West Lafayette.

The credits accumulate, so the student who earns the bachelor s degree will have completed requirements for all three programs.

PREREQUISITES (12 credits)

3	ENGL 101	English Composition I
3	OLS 252	Human Behavior in Organizations
3	OLS 274	Applied Leadership
3	OLS 376	Human Resource Issues

REQUIRED TECHNICAL COURSES (15 credits)

3	OLS 372	Compensation and Benefits
3	OLS 378	Labor/Management Relations
3	OLS 477	Conflict Management
3	OLS 487	Leadership Philosophy
3	OLS xxx	Selective

Total credits required for certificate: 27

A minimum of 15 credits must be taken at Purdue University North Central. All certificate track students must meet admission requirements of the School of Technology and be admitted to the organizational leadership and supervision program. This certificate plan of study is an entry-level, pre-associate degree program.

QUALITY CONTROL CERTIFICATE

This certificate program provides training and instruction in the proper use of measuring instruments, data analysis and techniques of statistical quality control, including frequency distributions, process control charts, six sigma concepts and sampling plans. In addition, the course work provides a basis for practical implementation of these techniques in the quality control system of an industrial organization. An in-depth investigation of the jobs of quality control, the role of quality costs, determining customer needs, total quality management, follow-up on field performance and feedback to further improve the quality system are integral parts of this program.

Candidates for this program are required to be formally admitted to Purdue University North Central. Mathematics placement tests are required prior to taking any mathematics course. Students may apply these courses toward an associate degree in industrial engineering technology or mechanical engineering technology as appropriate. A certificate will be presented to those who successfully complete all course work.

REQUIRED COURSES (21 credits)

Listed in the order in which they should be taken.

3	MA 153	Algebra and Trigonometry I
3	MA 154	Algebra and Trigonometry II
3	STAT 301	Elementary Statistical Methods
3	MET 141	Materials I
3	IET 204	Techniques of Maintaining Quality
3	IET 364	Total Quality Management
3	Technical Elective+	

Total credits required for certificate: 21

+ Business or Technical elective to suit the individual. Actual course selection, subject to advisor approval, may be from the following: CPT, MET, IET, EET,GBG, GBA, or MGMT.

**ASSOCIATE OF SCIENCE DEGREE
IN ARCHITECTURAL TECHNOLOGY**

This curriculum is not designed to educate registered architects.

This program prepares students for employment with architects, contractors, building materials suppliers, and various governmental agencies. Graduates accept positions as architectural draftsmen, estimators, planning technicians, field inspectors, and sales representatives. It is offered at the North Central Campus in conjunction with the School of Technology of Purdue University at West Lafayette.

The drafting courses begin with basic fundamentals and extend into wood frame systems and intermediate-size buildings. Other drawing courses include presentation techniques. Materials, surveying, specifications, estimating, mechanical equipment and other courses related to construction are also a part of the program. Related courses in the areas of mathematics, physical sciences, and humanities are essential in the development of a person who wishes to advance in the field of construction.

Graduates of this program may continue their education toward the Bachelor of Science degree in supervision (construction emphasis) at this campus or toward the Bachelor of Science degree in building construction management at West Lafayette or construction technology at Purdue Calumet.

General Plan of Study: Architectural Technology

FRESHMAN YEAR

First Semester

3	ART 299P	Plans and Specifications
2	BCM 100	Introduction to Construction
3	CGT 110	Computer Graphics Communications
3	CPT 188S	Microcomputer Spreadsheet Applications
3	ENGL 101	English Composition I
<u>3</u>	MA 153	Algebra and Trigonometry I
17		

Second Semester

3	ART 150	Architectural Construction I
3	BCM 235	Construction Materials and Systems
3	CGT 290	Computer-Aided Drafting and Design
3	MET 111	Applied Statics
3	COM 114	Fundamentals of Speech Communications
<u>3</u>	MA 154	Algebra and Trigonometry II
18		

SOPHOMORE YEAR

Third Semester

3	BCM 112	Construction Surveying Fundamentals
3	BCM 230	Mechanical and Electrical Systems
3	BCM 270	Materials and Estimates
4	MET 211	Applied Strength of Materials
3	ENGL 102	English Composition II
<u>3</u>	ECON 210	Principles of Economics
19		

Fourth Semester

2	ART 221	Architectural Presentation
3	ART 222	Architectural Construction II
3	BCM 212	Construction Layout
3	BCM 345	Scheduling
3	BCM 380	Concrete Construction
<u>4</u>	PHYS 220	General Physics I
18		

Total credits required for associate degree: 72

**ASSOCIATE OF SCIENCE DEGREE
IN BUILDING CONSTRUCTION MANAGEMENT**

This curriculum prepares students as professional constructors, but not for registration as professional architects or engineers.

This program prepares students to become professional contractors-managers of the construction process. The program emphasizes the management of the people, money, machines, and materials with which structures are built. It stresses production rather than design, and management skills rather than craft skills.

Graduates are prepared to work for all types of contractors: residential, commercial, industrial, highway, heavy, mechanical, electrical and specialty. Graduates also are prepared for work in both the field and the office. Experienced graduates fill positions such as job superintendent, estimator, scheduler, cost analyst, project manager and company executive.

Emphasis of this program is placed on the development of the job skills needed by contractors, including plan reading, estimating, surveying, drafting and accounting. Graduates of this program may continue their education toward the Bachelor of Science in supervision (construction emphasis) at this campus or toward the Bachelor degree in building construction management at West Lafayette or construction technology at Purdue Calumet.

General Plan of Study: Building Construction Management
FRESHMAN YEAR

First Semester

2	BCM 100	Introduction to Construction
3	ART 299P	Plans and Specifications
3	CGT 110	Computer Graphics Communications
3	CPT 188S	Microcomputer Spreadsheet Applications
3	ENGL 101	English Composition I
<u>3</u>	MA 153	Algebra and Trigonometry I
17		

Second Semester

3	BCM 235	Construction Materials and Systems
3	ART 150	Architectural Construction I
3	CGT 290	Computer-Aided Drafting and Design
3	MET 111	Applied Statics
3	COM 114	Fundamentals of Speech Communications
<u>3</u>	MA 154	Algebra and Trigonometry II
18		

SOPHOMORE YEAR

Third Semester

3	BCM 112	Construction Surveying Fundamentals
3	BCM 230	Mechanical and Electrical Systems
3	BCM 270	Materials and Estimates
4	MET 211	Applied Strength of Materials
3	ENGL 102	English Composition II
<u>3</u>	MA 223	Introductory Analysis I
19		

Fourth Semester

3	BCM 212	Construction Layout
3	BCM 345	Scheduling
3	BCM 380	Concrete Construction
3	ECON 210	Principles of Economics
3	MGMT 200	Introductory Accounting
<u>4</u>	PHYS 220	General Physics I
19		

Total credits required for associate degree: 73

**ASSOCIATE OF SCIENCE DEGREE
IN CIVIL ENGINEERING TECHNOLOGY**

The curriculum is not designed to educate professional engineers or registered land surveyors.

This program is designed to prepare students for employment with land surveyors, highway departments, contractors, city engineering offices and engineering consultants, as well as with other specializations of civil engineering. Graduates accept positions as topographers, structural draftsmen, steel and concrete laboratory technicians, or as instrument operators doing land and highway surveys. With additional experience they may acquire positions as supervisors, or chiefs of parties in a variety of work associated with civil engineering.

The surveying courses begin with basic operation and use of equipment and progress through route surveying, land surveying and subdivision. Other groups of courses consider structural systems, materials, strength of materials, and specifications and estimating. To broaden the technician's ability to communicate in words and figures, courses in mathematics, physical science and communicative skills are required.

This program is offered at the North Central campus in conjunction with the School of Technology of Purdue University at West Lafayette. Graduates may continue their education toward the Bachelor of Science degree in supervision (construction emphasis) at this campus or toward the Bachelor of Science degree in building construction management at West Lafayette or construction technology at Purdue Calumet.

**General Plan of Study: Civil Engineering Technology
FRESHMAN YEAR**

First Semester

3	ART 299P	Plans and Specifications
2	BCM 100	Introduction to Construction
3	CGT 110	Computer Graphics Communications
3	CPT 188S	Microcomputer Spreadsheet Applications
3	ENGL 101	English Composition I
<u>3</u>	MA 153	Algebra and Trigonometry I
17		

Second Semester

3	ART 150	Architectural Construction I
3	BCM 235	Construction Materials and Systems
3	CGT 290	Computer-Aided Drafting and Design
3	MET 111	Applied Statics
3	COM 114	Fundamentals of Speech Communications
<u>3</u>	MA 154	Algebra and Trigonometry II
18		

SOPHOMORE YEAR**Third Semester**

3	BCM 112	Construction Surveying Fundamentals
3	BCM 270	Materials and Estimates
4	MET 211	Applied Strength of Materials
3	ENGL 102	English Composition II
3	ECON 210	Principles of Economics
<u>3</u>	MA 223	Introductory Analysis I
19		

Fourth Semester

3	CET 209	Land Surveying and Subdivision
3	CET 253	Hydraulics and Drainage
3	BCM 212	Construction Layout
3	BCM 380	Concrete Construction
3	MA 224	Introductory Analysis II
<u>4</u>	PHYS 220	General Physics I
19		

Total credits required for associate degree: 73

ASSOCIATE OF SCIENCE DEGREE IN ELECTRICAL ENGINEERING TECHNOLOGY

Accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202, Telephone: 410-347-7700.

The electrical engineering technology (EET) program is a combination of courses in electricity, electronics, mathematics, science, and general academic areas leading to the Associate of Science degree. The program is designed to prepare students for employment as technicians in research laboratories, electronic industries, and in any industry that uses electrical power or electronic controls.

The curriculum provides the student with sufficient education to find employment in the fields of communications electronics, industrial electronics, military electronics, computer electronics, automation, industrial controls, electronic servicing, electrical power, aviation electronics, and others. A considerable amount of laboratory work is required.

Graduates may continue their education toward the Bachelor of Science degree in electrical engineering technology on the West Lafayette, Calumet, Fort Wayne or Indianapolis campuses. A grade point average of 2.2 or higher in EET and mathematics courses is required for entry into the bachelor's degree program at West Lafayette. Each student is responsible for scheduling the necessary prerequisites and courses to meet the requirements for graduation.

Graduates may also work toward the Bachelor of Science degree on the Purdue University North Central campus. The bachelor s degree in organiza-tional leadership and supervision with an electrical engineering technology emphasis is available. A description of the program can be found in the bac-calalaureate degree section of this catalog. An appropriate plan of study can be obtained from one of the School of Technology advisors.

General Plan of Study: Electrical Engineering Technology
FRESHMAN YEAR

First Semester

4	EET 107	Introduction to Circuit Analysis
3	EET 109	Digital Fundamentals
2	EET 196	Introduction to EET Projects
3	ENGL 101	English Composition I
<u>3</u>	MA 153	Algebra and Trigonometry I
15		

Second Semester

4	EET 157	Electronics Circuit Analysis
4	EET 159	Digital Applications
3	COM 114	Fundamentals of Speech Communication
3	MA 154	Algebra and Trigonometry II
<u>3</u>		Computer Programming Elective
17		

Summer-SOPHOMORE

<u>4</u>	EET 231	Electrical Power and Controls
4		

SOPHOMORE YEAR

Third Semester

4	EET 207	AC Electronics Circuit Analysis
4	EET 209	Introduction of Microcontrollers
3	CGT 110	Computer Graphics Communications
3	MA 223	Introductory Analysis I
<u>3</u>		Humanities/Social Science Elective
17		

Fourth Semester

4	EET 257	Power and RF Electronics
3	MA 224	Introductory Analysis II
4	PHYS 220	General Physics I
<u>4</u>		EET Elective
15		

EET ELECTIVES

4	EET 302	Introduction to Control Systems (prerequisite: EET 231)
4	EET 304	Introduction to Communication Systems (pre- and corequisites: EET 257, MA 224)
4	EET 309	Advanced Imbedded Controllers (prerequisite: EET 209)
4	EET 331	Generation and Transmission of Electrical Power (prerequisite: EET 231)

HUMANITIES ELECTIVES

Select from courses in Art, English, History, Foreign Language, Music or Philosophy. English courses must be 200 level or above. If you speak a language other than English, you may be able to test out of one or more semesters of that language, thereby receiving credit for your Humanities Elective.

SOCIAL SCIENCES ELECTIVES

Select from courses in Anthropology, Political Science, Psychology or Sociology.

Total credits required for associate degree: 68

**ASSOCIATE OF SCIENCE DEGREE
IN INDUSTRIAL ENGINEERING TECHNOLOGY**

Accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202, Telephone: 410-347-7700.

This major field of specialization is designed to develop technicians to support the problem-solving and decision-making functions in management and to prepare for planning and control, work method analysis, work measurements, quality assurance and controls, and systems and procedures analysis. Practical applications of production-oriented operations, research techniques, data processing and computer fundamentals are stressed.

The industrial engineering technician often is initially employed in the industrial engineering, quality control, manufacturing engineering, production control, process engineering or plant layout department. With increased experience the student may advance within the department, directly assisting a professional industrial engineer, or may become a production supervisor. This broad technical background, together with the human relations background and a proficiency in engineering methods and mathematics, enables the industrial engineering technician to take advantage of opportunities for advancement in many directions.

Graduates may continue their education toward the Bachelor of Science degree in organizational leadership and supervision or the proposed Bachelor of Science degree in Industrial Technology with an emphasis in industrial engineering technology applications at Purdue University North Central.

General Plan of Study: Industrial Engineering Technology

FRESHMAN YEAR

First Semester

3	IET 104	Industrial Organization
3	CGT 110	Computer Graphics Communications
3	COM 114	Fundamentals of Speech Communications
3	ENGL 101	English Composition I
<u>3</u>	MA 153	Algebra and Trigonometry I
15		

Second Semester

3	IET 250	Fundamentals of Production Cost Analysis
3	ENGL 102	Technical Writing
3	ECON 210	Principles of Economics
3	MA 154	Algebra and Trigonometry II
3		Technical Elective
<u>3</u>	(IET 268, 312)	IET Elective
18		

SOPHOMORE YEAR

Third Semester

3	IET 262	Motion Study and Work Methods
3	IET 224	Production Planning & Control
3	CGT 290	Computer-Aided Drafting and Design
3	STAT 301	Elementary Statistical Methods
3	MA 223	Introductory Analysis I
<u>2</u>	Technical Elective	
17		

Fourth Semester

3	IET 204	Techniques of Maintaining Quality
3	IET 266	Work Measurement & Incentives
2	IET 296	Industrial Technology Case Problems
3	MET 141	Materials I
3	OLS 252	Human Behavior in Organizations
<u>4</u>	PHYS 220	General Physics I
18		

TECHNICAL ELECTIVES

3	CPT 175E	Visual Programming
3	CS 140	Introduction to Data Processing – Visual Basic
3	ENGR 195E	“C++” Language Programming for Engineering and Technical Applications
3	IET 202	Principles of Industrial Robots
3	IET 252	Techniques of Indirect Labor Control
3	IET 268	Plant Layout
3	IET 312	Materials Handling
3	CIMT 243	Automated Manufacturing Processes I
3	IET 364	Total Quality Management

Total credits required for associate degree: 68

**Human Resource Management
and Development Emphasis**

This curriculum was designed with the cooperation and advice of area human resource executives and is continually updated to meet changing needs of today’s workplace. Students choosing this curriculum are preparing for new careers or are developing and updating skills for professional or managerial positions in the fields of personnel, training or organizational development. Graduates will be prepared to:

- Recruit, interview and hire job applicants.
- Administer compensation and benefits programs.
- Train and develop managers and employees.
- Build teams.
- Administer EEOC and Affirmative Action programs.
- Develop and restructure organizations.

The curriculum is designed to give students a deeper understanding of human beings—a quality vital for effectiveness in today’s human resource field. Following the suggestions of human resource professionals, courses incorporate current developments in areas such as:

Compensation and Benefits	Employee Relations
Staffing	Human Resource Information Systems
Business Management	Employee Training and Development
Organizational Development and Restructuring	Federal Regulations Affecting the Workplace

The curriculum is planned to meet the needs of both full- and part-time students, with courses in the daytime and evening. It also is flexible enough to allow noncontinuous progress should the student be unable to take classes every semester.

Students working toward the bachelor's degree continue studies that emphasize the human element in human resources, as well as additional professional studies in current topics. This degree takes the equivalent of four semesters of full-time study beyond the associate degree, and offers increased opportunity for both professional courses and those from general University offerings.

For information on specific course requirements and a plan of study, contact an advisor or clerical staff member in the Purdue North Central Technology/Engineering Department office.

Industrial and Manufacturing Engineering Technology Emphasis

This major field of specialization is designed to develop technologists to support the problem-solving and decision-making functions in management and to prepare for planning and control, work method analysis, work measurements, robotics, CNC systems, quality assurance and controls, and systems and procedures analysis. Practical applications of production-oriented operations, research techniques, data processing, and computer fundamentals are stressed.

The industrial engineering technologist is often initially employed in the industrial or manufacturing engineering time study, quality control, production control or plant layout department. With increased experience the student may advance within the department, directly assisting a professional industrial engineer, or may become a production supervisor. This broad technical background, together with the human relations background and proficiency in engineering methods and mathematics, enables the industrial engineering technologist to take advantage of opportunities for advancement in many directions.

An appropriate plan of study for this degree emphasis can be obtained from the Technology/Engineering Department office.

BACHELOR OF BEHAVIORAL SCIENCES

The Bachelor of Arts in Behavioral Sciences is designed to give students the necessary groundwork for entry-level employment in social services or social work, currently one of the fastest-growing fields in the Midwest. It also provides a solid foundation for students wishing to pursue graduate work in psychology, sociology, or social work.

Students may choose from one of three options - psychology, sociology, or social work - with the psychology and social work options allowing students practicum hours of field work under the mentorship of a professor. Students will complete 126 total credit hours, with 15 hours being completed in their option, 24 hours completed in a general behavioral science core, 57-66 hours of general education core requirements and the remaining hours for electives of the students choosing. The degree is governed by the School of Liberal Arts of Purdue University.

THE CURRICULUM

A total of 126 credit hours are required for the Bachelor of Arts in Behavioral Sciences. Guidelines are as follows:

GENERAL EDUCATION CORE

- 6 English Composition
- 3 Speech Communication
- 6 Mathematics/Statistics
- 6 Natural Sciences
- 3 Foreign Language (FLL 202)
- 6 Western Heritage
- 3 Social Ethics
- 6 Individual & Society
- 3 United States Tradition
- 3 Aesthetic Awareness
- 3 Gender Issues
- 3 Race/Ethnic Diversity
- 3 Other Cultures
- 3 Global Perspective

BEHAVIORAL SCIENCE CORE

- | | | |
|---|----------|--------------------------------------|
| 3 | PSY 120 | Elementary Psychology |
| 3 | SOC 100 | Principles of Sociology |
| 3 | SOC 220 | Social Problems |
| 3 | PSY 350 | Abnormal Psychology |
| 3 | STAT 301 | Elementary Statistical Methods |
| 3 | PSY 240 | General Social Psychology or |
| | SOC 340 | General Social Psychology |
| 3 | PSY 201 | Quantitative Topics in Psychology or |
| | SOC 382 | Methods of Social Research I |

3	PSY 203	Research Methods in Psychology	or
	SOC 383	Methods of Social Research II	

Options

Students will choose an option in psychology, sociology, or social work:

PSYCHOLOGY

3	PSY 251	Health Psychology
3	PSY 360	Developmental Psychology
3	PSY 380	Behavior Change Methods
3	PSY 450	Crisis Intervention
3	PSY 498	Senior Research

SOCIAL WORK

3	SWRK 261	Introduction to Social Work
3	SWRK 361	Institution of Social Welfare
3	SWRK 362	Social Work Practice I
3	SWRK 363	Social Work Practice II
3	SWRK 461	Field Practicum in Social Work

SOCIOLOGY

3	SOC 310	Racial and Ethnic Diversity
3	SOC 324	Criminology
3	SOC 391	Sociology of Violence
3	SOC 411	Social Stratification
3	SOC 421	Juvenile Delinquency

ELECTIVE COURSES

Between 21 and 30 hours of electives are available to students. Students are encouraged to take courses in Adult Development and Aging, Industrial Psychology, and Child/Family Behavior.

BACHELOR OF LIBERAL STUDIES

The liberal studies baccalaureate program was designed by the faculty of Purdue University North Central to meet the educational needs of those students who desire a broad exposure to the humanities, social sciences, physical sciences, mathematics, and technology. The program is offered at the North Central campus in conjunction with the School of Liberal Arts of Purdue University at West Lafayette.

Each student will follow an appropriate course of study approved by an advisor, which will include a primary and secondary area of study (concentrations) specifically designed to meet the needs and career goals of the individual. The electives enable the student to pursue areas of personal interest.

In addition, the liberal studies program is designed to permit the individual who has earned credits at other colleges, or in other programs, or who has earned an associate degree, to incorporate previously earned credits into a baccalaureate program which can be completed at Purdue University North Central.

CORE REQUIREMENTS (45 credits)

- 6 Composition
- 3 Communication
- 6 Mathematics/Statistics
- 6 Natural Science
- 9 Western Heritage/Social Ethics/
Individual & Society
- 3 United States Tradition
- 3 Other Cultures/Global Awareness
- 3 Aesthetic Awareness
- 3 Race/Ethnic Diversity
- 3 Gender Issues

OTHER REQUIREMENTS (81 credits)

CONCEPT DEVELOPMENT

12 credits may be in either:
Foreign Languages **or**
Statistics and Computers

PRIMARY AREA OF STUDY

A minimum of 30 credits is required (ordinarily distributed among three or more departments) taken beyond the core. The primary area of study must be agreed upon by the student and the academic advisor. The primary areas of study include but are not limited to:

- Humanities: creative arts, foreign literature, literature, philosophy, history.
- Social and behavioral sciences: economics, political science, psychology, sociology.
- Natural science and mathematics: biology, chemistry, mathematics, physics.
- Various technology and interdisciplinary areas.
- A minimum of 21 credits must be taken in a secondary area of study.
- Electives - 18 credits maximum.

Total credits required for baccalaureate degree: 126

OTHER REQUIREMENTS AND LIMITATIONS

- A minimum of 30 credits must be taken at the 300 level or above.
- A minimum of 30 credit hours must be taken at Purdue University North Central.
- A minimum of 32 credits must be taken at a campus of Purdue University at the junior level or above.
- Students must have a completed plan of study on file with the Behavioral, Social Sciences and Humanities Department by the middle of the junior year. Otherwise, on-time graduation cannot be assured.

- A maximum of six courses from any one department may be counted toward the fulfillment of the degree requirement. (In exceptional cases, the Liberal Studies Academic Advisory Committee, instituted to oversee the entire Bachelor of Liberal Studies degree program, may extend this maximum course allowance by one course).
- MA 111 is accepted for credit in the School of Liberal Arts.
- English 100 is accepted for credit in the School of Liberal Arts.
- GNC 100 is accepted for credit in the School of Liberal Arts.
- A maximum of 50 percent of the primary area and 50 percent of the secondary area can be transferred courses from universities other than Purdue.

BUSINESS/PROFESSIONAL COMMUNICATIONS CERTIFICATE

This certificate provides an opportunity for students to participate in a practical program of study that focuses on strengthening written and oral occupational skills. It is offered at the North Central campus in conjunction with the School of Liberal Arts of Purdue University at West Lafayette.

Accepted students will have the chance to expand their knowledge in a variety of business areas, including small group communication, interviewing, public speaking, and technical writing. In addition, the final project will allow participants to apply what they have learned via a supervised internship at an approved site.

The program is open to current students who have completed 30 or more credit hours in a degree program or individuals employed in a position deemed academically equivalent by the certificate coordinator.

Credit for courses in the certificate program which have been earned in other degree programs will be accepted toward the certificate. Courses taken to fulfill certificate requirements may be applied toward requirements for associate and bachelor’s degrees.

REQUIREMENTS (15 credits)

3	ENGL 101	English Composition I
3	ENGL 102	English Composition II) or ENGL 421 (Technical Writing)
3	COM 114	Fundamentals of Speech Communication
3	COM 204	Communication and Social Knowledge
3	CPT 107	Computer Literacy

ELECTIVES (choose 3)

3	ENGL 304	Advanced Composition
3	ENGL 420	Business Writing
3	COM 315	Speech Communication of Technical Information
3	COM 318	Principles of Persuasion
3	COM 320	Small Group Discussion

3	COM 324	Introduction to Organizational Communication
3	COM 325	Interviewing: Principles and Practices
3	COM 415	Discussion of Technical Problems
3	COM 491	Special Topics in Communication
3	CPT 188S	Microcomputer Spreadsheet Applications

TERMINAL PROJECT/INTERNSHIP

3	COM 490	Internship in Communication (A critical reflection and summary project based on the student’s experience in a supervised internship at an approved site.)
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Total credits required for certificate: 27 (12 of which many students will have taken in meeting other degree requirements.)

BACHELOR OF ENGLISH

The Bachelor of Arts in English has been developed by the faculty in the Department of English and the School of Liberal Arts of Purdue University at West Lafayette. Students become acquainted with the major literary works of the English language and with the general history ideas that have shaped world civilizations. Such studies strengthen and refine critical thinking and writing skills, preparing students to participate intelligently in their communities and in their chosen workplaces.

A degree in English traditionally has been considered a step toward careers in teaching, scholarly research or writing. The English program at Purdue University North Central certainly can prepare students to follow one of these paths. English majors also find, however, that their degrees are welcomed in business, the professions, media, technology and government, as well as academia.

All English majors must complete both 54-57 credits of core requirements and a 33-credit sequence of English classes.

General Plan of Study: English

CORE REQUIREMENTS

3-6	English composition
3	Speech communication
3	Foreign language (French, German or Spanish at the fourth level)
6	Mathematics and statistics
6	Natural science (astronomy, biology, geology, chemistry and physics)
6	Western heritage
3	United States tradition
3	Other cultures
3	Aesthetic awareness
3	Racial and ethnic diversity
3	Gender issues

6	Individual and society
3	Social ethics
3	Global perspective

The major in English supplements the core with courses that survey English and American literature, examine specific literary themes and genres, cover a particular major author or authors, strengthen writing and reasoning skills, and study the English language itself. Some of these courses are specifically required; others represent choices within groupings of courses.

A minor is NOT REQUIRED with this major.

PREREQUISITE

In order to work toward this major, the student must have credit in ENGL 101, 102 and ENGL 227 or the equivalent.

REQUIRED COURSES (33 credits)

Choose from the following English courses to meet requirements in each area.

INTRODUCTORY COURSES (9 credits)

3	ENGL 201	The Nature of Literary Study
3	ENGL 240	Survey of British Literature: From the Beginnings Through the Neoclassical Period or
3	ENGL 241	Survey of British Literature: From the Rise of Romanticism to the Modern Period
3	ENGL 350	Survey of American Literature: From Its Beginnings to 1865 or
3	ENGL 351	Survey of American Literature: From 1865 to the Post World War II Period

MAJOR AUTHORS (3 credits)

3	ENGL 441	Chaucer s Canterbury Tales
3	ENGL 442	Shakespeare
3	ENGL 444	Milton s Major Poetry

AREA STUDIES (9 credits)

One course from each of three areas: genre studies, historical studies, cultural studies, theoretical studies and English language studies.

ELECTIVES (9 credits)

Three additional courses in English at the 200 level or above.

CAPSTONE COURSE (3 credits)

3	ENGL 495	Capstone Seminar for Seniors in English
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Total credits required for baccalaureate degree: 126

Because the core and major requirements include up to 90 credit hours, the student has plenty of opportunity to pursue special interests. Some students elect to pursue a second major. Others complete a minor, although a minor is not required with this degree. Still others sample courses from a variety of areas. The avenue the student chooses depends on academic or career goals. For example, some students choose electives that enhance their understanding of literature, such as history, philosophy or science. Others choose to develop their marketability by taking courses in technical areas or business.

ENGLISH TEACHING OPTION

Although the Bachelor of Arts English Teaching option (for teaching English at the high school level) is not available at Purdue University North Central, interested students are able to complete some education courses, all core requirements and all courses required in the English major at the North Central campus. Requirements in education may then be readily completed at one of the Purdue campuses where the degree is offered.

BACHELOR OF SCIENCE IN BUSINESS

Accredited by the Association of Collegiate Business Schools and Programs, 7007 College Blvd., Suite 420 Overland Park, KS 66211; 913-339-9356; www.acbsp.org.

Purdue North Central offers a Bachelor of Science in Business degree with several major or specialization areas. In addition, Purdue North Central offers an Associate of Science degree in Business.

Bachelor of Science in Business

Major Areas:

- Accounting
- Management
- Marketing

The Bachelor of Science in Business has been designed to prepare students for positions of authority in enterprises that engage in a wide range of business activities. Business majors develop a broad perspective of the business organization and the economic environment in which it operates, accompanied by the opportunity to major in areas including Accounting, Management or Marketing. A distinctive and flexible general education component establishes a broad educational foundation that facilitates long term professional development skills that respond to changing employment opportunities.

The 126 credit hour Bachelor of Science in Business devotes 36 credit hours to business and related core areas, and 30 credit hours to an area of specialization. The remaining 60 credit hours are comprised of core skills areas and general education electives, intended to provide the breadth of background needed for long-term career development.

Students work with a faculty advisor to develop a program of study that reflects their own interests within business and in other fields. In order to complete the plan of study and receive a Bachelor of Science within four years, students should plan on taking 15 credit hours per semester for 6 semesters, and 18 credit hours for an additional two semesters. However, the plan of study is flexible in accommodating both full-time and part-time students during the day, evening and summer sessions.

Program Requirements: Bachelor of Science in Business

GENERAL EDUCATION AND CORE SKILLS REQUIREMENTS

- | | |
|----------|--|
| ENGL 101 | English Composition I |
| ENGL 102 | English Composition II |
| COM 114 | Fundamentals of Speech Communications/Writing Elective |
| MA153 | Algebra and Trigonometry I |
| STAT 213 | Probability and Decision Theory |

CPT 107	Computer Literacy
	Quantitative/Computing Elective
	Aesthetic Awareness Elective
	Western Heritage Elective (2 courses)
	Natural Science Elective (2 courses)
	Cultural/Social/Behavioral Elective (2 courses)
	United States Tradition Elective (2 courses)
	General Education Elective (3 courses)

BACHELOR OF SCIENCE IN BUSINESS - REQUIREMENTS BY MAJOR

ACCOUNTING

GBG 127	Introduction to Business
OLS 252	Human Behavior in Organizations
GBG 260	Business Law
MGMT 200	Introductory Accounting
GBA 330	Managerial Accounting I
ECON 251	Microeconomics
GBM 329	Principles of Marketing
GBG 333	Business Finance
GBG 351	Organization and Management
GBA 228	Principles of Accounting II
GBA 340	Intermediate Accounting I
GBA 341	Intermediate Accounting II
	Specialization Electives (10 courses)

MANAGEMENT OR MARKETING*

GBG 127	Introduction to Business
OLS 252	Human Behavior in Organizations
GBG 260	Business Law
MGMT 200	Introductory Accounting
MGMT 201	Managerial Accounting I
ECON 251	Microeconomics
ECON 252	Macroeconomics
GBM 329	Principles of Marketing
GBG 333	Business Finance
GBI 301	Introduction to International Business
GBG 351	Organization and Management
GBG 405	Business Strategy
	Management Specialization Electives (10 courses) or
	Marketing Specialization Electives (10 courses)

*Subject to approval and/or change. See the Business Academic Advisor or Marketing Coordinator for more information.

ASSOCIATE OF SCIENCE IN BUSINESS

The primary goal of the Associate of Science in Business is to provide students with above entry-level skills in a variety of business disciplines or for preparation to enter one of the three Bachelor of Science in Business options. The 63 credit hour Associate of Science in Business devotes 33 credit hours to business and related areas, including a common business core and 9 credit hours of electives. The remaining credit hours are comprised of core skills areas and general education electives. In order to complete the plan of study and receive an Associate of Science within two years, students should plan on taking 15 credit hours per semester for 3 semesters and 18 credit hours for one additional semester. However, the program requirements is flexible in accommodating both full-time and part-time students during the day, evening and summer sessions.

Program Requirements: Associate of Science in Business

GENERAL EDUCATION AND CORE SKILLS REQUIREMENTS

- ENGL 101 English Composition I
- ENGL 102 English Composition II
- COM 114 Fundamentals of Speech
- MA 153 Algebra and Trigonometry
- STAT 213 Probability and Decision Theory
- CPT 107 Computer Literacy
- Aesthetic Awareness Elective
- Western Heritage or United States Tradition Elective
- Natural Science Elective
- Cultural/Social/Behavioral Elective

BUSINESS CORE

- GBG 127 Introduction to Business
- OLS 252 Human Behavior in Organizations
- GBG 260 Business Law
- MGMT 200 Introductory Accounting
- MGMT 201 Managerial Accounting I
- ECON 251 Microeconomics
- ECON 252 Macroeconomics or GBA 228 Principles of Accounting II
- GBM 329 Principles of Marketing
- Electives (3 courses)

Note: All courses required for the Associate of Science in Business count towards the Bachelor of Science in Business with the possible exception of the electives in the Business Core. Please check with the Business Department Advisor before registering for these elective courses.

BUSINESS INTERNSHIP OPPORTUNITY

Students who have completed Introduction to Business (GBG 127) and 45 credits of course work may elect to participate in the Business Internship program. The student will work at a local business for an average of 15 hours per week performing duties that relate to the student s major field. An hourly wage will be paid to the student by the employer and, upon successful completion of all internship requirements, the student will earn credit toward graduation.

BUSINESS CERTIFICATE

The certificate program was designed to provide a relatively quick introduction to the basics of business. It involves completing 27 credits of required and selective course work. At least 15 of those credits must be earned at a Purdue University campus. The curriculum is governed by the Faculty of Purdue University North Central.

Students who wish to apply to the business certificate program must have completed at least six semesters of English while in high school. They also must have completed a course of study and attained a level of achievement that reflects the upper half of their high school graduating class.

REQUIRED COURSES (18 credit hours)

3	ENGL 101	English Compostion I
3	ENGL 102	English Compostion II or
3	ENGL 421	Technical Writing
3	MA 111+	Algebra (or higher math course)
3	GBG 127	Introduction to Business
3	MGMT 200	Introductory to Accounting
3	GBM 329	Principles of Marketing

SELECTIVE (3 credit hours)

Choose from the following:

3	COMM 114	Fundamental of Speech Communication
3	GBA 228	Principles of Accounting II
3	CPT 107++	Computer Literacy
3	GBG 260	Business Law
3	GBG 270	Small Business & Entrepreneurial Ventures
3	GBG 333	Principles of Finance
3	STAT 114	Elements of Probability & Statistics (or higher level course)
3	OLS 252	Human Behavior in Organizations

Total credits required for certificate: 27

- + MA 111 does not count for graduation credit toward the Associate Degree of Science in Business.
- ++ Another appropriate computer class could be substituted with the permission of the chair of the Business Department.

MASTER OF SCIENCE IN ELEMENTARY EDUCATION

The Graduate School of Purdue University offers a 30-credit, non-thesis, program of study leading to the Master of Science degree in elementary education. All courses leading to the degree may be taken at the North Central campus. The program is designed to further the education of those who possess the baccalaureate in elementary education. However, applicants who do not meet this criterion but do meet general Graduate School admission standards may be granted conditional acceptance with full admission awarded when deficiencies have been removed.

A student with an undergraduate grade point average (GPA) of less than a 3.0 on a 4.0 scale is required to take the Graduate Record Examination. A student who has made application for admission may take up to 12 credit hours while admission is pending.

Individuals who are considering enrollment in the master's program are encouraged to contact the Education Department for an appointment with the graduate program advisor.

TRANSFER OF CREDIT

As many as 15 hours of graduate credit earned at other universities may be applied toward this advanced degree at the discretion of the department.

LICENSE RENEWAL

Teachers who are required to take college credit to renew their teaching certificate also may take courses at Purdue University North Central. They are encouraged to contact the graduate program advisor in the Education Section for details.

General Plan of Study: Elementary Education Master's

The Graduate School conducts ongoing assessment of its admission standards, course offerings, and graduation requirements which may change while this catalog is in print.

Once accepted for admission, the student selects an advisory committee chairperson. Together they select two other faculty for the committee. The student, in concert with the committee members, formulates the student's individual plan of study.

Foundations Block (9 Hours)*

The student will elect one course from each of the three following areas:

A. Humanistic Education (One course)

- | | |
|----------|--|
| EDPS 530 | Advanced Educational Psychology |
| EDPS 535 | Personal-Social Dynamic in the Classroom |
| PSY 502 | Survey of Human Development |

B. Diversity

- EDCI 585 Multi-Cultural Education

C. Research

- EDPS 533 Introduction to Educational Research I: Methodology

* Students must also create a professional portfolio to demonstrate attainment of the Graduate Competencies.

Curriculum Theory (3 Hours)

- | | |
|----------|--|
| EDCI 580 | Foundations of Curriculum |
| EDCI 608 | Individualizing Instruction in the Elementary
and Secondary Schools |

Methods (12 Hours)

A. Literacy and Language (3 hrs.)

- EDCI 500 Foundations of Literacy

B. Science (3 hrs.)

- | | |
|----------|---|
| EDCI 506 | Environmental Education |
| EDCI 605 | Teaching Science in the Elementary School |
| EDCI 609 | Earth Science Teaching |

C. Social Studies (3 hrs.)

- EDCI 604 Teaching Social Studies in the Elementary School

D. Math (3 hrs.)

- EDCI 511 Teaching Mathematics in the Elementary School

Electives (6 Hours)

Consult with advisor

Total Hours = 30

ELEMENTARY EDUCATION GRADUATE COMPETENCIES

In order to complete the requirements for the Master of Science Degree in Elementary Education, students must demonstrate that they have met the following competencies:

1. Synthesize knowledge and think critically and reflectively
2. Create knowledge
3. Communicate knowledge
4. Participate in professional activities and development

Students will demonstrate their attainment of the competencies by completing certain required courses and through development of a program portfolio.

BACHELOR OF ARTS IN ELEMENTARY EDUCATION

Approved by the Indiana Commission of Higher Education and meets accreditation standards of the National Council for the Accreditation of Teacher Educators (NCATE), 2010 Massachusetts Ave. NW, Suite 500, Washington, D.C. 20036-1023; 202-466-7496; www.ncate.org.

Purdue University North Central offers a program of study leading to a Bachelor of Arts degree in elementary education, in conjunction with the School of Education of Purdue University at West Lafayette. Program brochures are available through the Office of Admissions, Dean of Students office, and the Education Department. Those who wish detailed information or who have questions concerning a specific situation should make an appointment to see the academic advisor for the Education Section.

The plan of study consists of: (1) the general education requirements; (2) the requirements for the major; and (3) a sufficient number of elective courses to bring the total credits to 127-132. Due to the importance of preparing teachers whose knowledge and skills are current, the School of Education will not accept as credit toward graduation from any undergraduate program any professional studies course completed 10 or more years prior to graduation.

Performance-based program, curriculum, assessment, and licensing in middle childhood (elementary education) have undergone significant change at the national, state and university levels. The plan of study presented here reflects comprehensive performance-based standards and assessment procedures in line with standards suggested by national accrediting bodies.

General Plan of Study: Elementary Education
FRESHMAN YEAR

First Semester

3	HIST 151	American History to 1877 or
	HIST 152	United States since 1877 or
	HIST 104	Introduction to the Modern World
3	MA 137 (130)	Mathematics for Elementary Teachers I
3	BIOL 205	Biology for Elementary School Teachers
3	ENGL 101	English Composition I
<u>3</u>	Foreign Language+	
15		

+ Students must pass the third course in foreign language. Students who find it necessary to take the first and second course prior to taking the third course will therefore graduate with more than the minimum credit hours. Some students choose to attend Summer School to reduce their academic year course loads.

Second Semester

3	HIST 151	American History to 1877 or
	HIST 152	United States History since 1877 or
	HIST 104	Introduction to the Modern World
3	MA 139 (131)	Mathematics for Elementary Teachers III
3	BIOL 206	Biology for Elementary School Teachers
3	EAS 120	Introduction to Geography or
	POL 101	American Government and Politics or
	SOC 100	Introductory Sociology
<u>3</u>	English Selective	
15		

SOPHOMORE YEAR

First Semester

BLOCK 1 COURSES

3	EDCI 205	Exploring Teaching as a Career
3	EDCI 285	Multiculturalism and Education Theory into Practice I

OTHER COURSES

3	MA 138 (132)	Mathematics for Elementary Teachers II
2	CHM 290E	Chemistry for Elementary Education
2	PHYS 290E	Physics for Elementary Education
<u>3</u>	EDFA 200	History and Philosophy of Education
16		

Second Semester

BLOCK II COURSES

3	EDPS 235	Learning and Motivation
3	EDPS 265	The Inclusive Classroom Theory into Practice II

OTHER COURSES

2	EDCI 270	Introduction to Educational Technology
3	EDCI 311	Media for Children
<u>3</u>	Elective	
14		

JUNIOR YEAR

First Semester

BLOCK III

3	EDCI 361	Social Studies in the Elementary School
6	EDCI 362	Literacy in the Elementary School I Theory into Practice III

OTHER COURSES

2	PE 322	Physical Education in the Elementary School
2	EAS 391E	Environmental Science for Elementary Teachers
<u>3</u>	English Selective	
16		

Second Semester
BLOCK IV COURSES

3	EDCI 363	Literacy in the Elementary School II
3	EDCI 364	Mathematics in the Elementary School
3	EDCI 365	Science in the Elementary School
		Theory into Practice IV

OTHER COURSES

3	A&D 201	Art for Elementary School Teachers
3	EAS 102	Earth Science for Elementary Teachers
<u>3</u>	ENGL 227	Elements of Linguistics
18		

SENIOR YEAR
First Semester
BLOCK V COURSES

3	EDPS 430	Creating and Managing Learning Environments
2	EDCI 466	Integrated Curriculum in the Elementary School
		Theory into Practice V

OTHER COURSES

3	MUS 324	Teaching Music in the Elementary School
3	ECON 219	Economics for Future Teachers or
	ECON 210	Principles of Economics
3	H&S 320	Health Education in the Elementary School
<u>3</u>	Elective	
17		

Second Semester
BLOCK VI COURSES

16	EDCI 496	Student Teaching
<u>—</u>		Theory into Practice VI
16		

Total credits required for baccalaureate degree: 127-132

ASSOCIATE OF SCIENCE DEGREE IN NURSING

The associate degree nursing program prepares men and women for careers in nursing and is offered in conjunction with the School of Nursing of Purdue University at West Lafayette. Upon successful completion of the program, an Associate of Science degree is granted. Graduates must have a minimum grade point average of 2.0 on a 4.0 scale to take the State Board Examination to earn licensure as registered nurses in Indiana. Indiana statutes mandate some restrictions on eligibility for licensure as a registered nurse. These restrictions primarily regard actions to protect the public from harm by individuals who may have a background of criminal, disciplinary, or substance abusive activities. Further information regarding these restrictions may be obtained from the Nursing Department office. The associate degree nursing program is accredited by the Indiana State Board of Nursing, Health Professions Bureau, 402 W. Washington, Indianapolis, IN 46204; 317-232-2960; www.state.in.us/hpb and by the National League for Nursing Accrediting Commission, 61 Broadway, New York, NY 10006; 212-363-5555, ext. 153; www.nlnac.org.

PHILOSOPHY

The faculty of the Nursing Section articulate a philosophy for the associate degree nursing program congruent with the mission statement of Purdue University North Central that defines their beliefs regarding the concepts of person, society, health, nursing practice, and the educational process as follows:

Society is an open system composed of numerous subsystems. Persons interact in social systems and subsystems to meet individual needs and to adapt to their internal and external environment. Through these interactions, the individual influences and is influenced by society.

Each person is a unique individual with basic human needs who responds to his/her environment as a unified whole. The human needs of each individual are defined in terms of developmental processes through the life span that are met based upon each person's ability to adapt to his/her internal and external environment. Each person, as a rational, sentient being, has the right to participate in decisions which affect his/her health.

The unifying concept of health incorporates the human needs, developmental processes, and the ability to maximize individual potential. Health reflects the capacity for adaptation and constitutes a state of optimal functioning on the continuum of health-illness.

The practice discipline of nursing, characterized by a commitment to the value of caring, assists individuals, families, communities and society in the promotion of optimal health. The nursing process is central to the concept of nursing practice with the inherent goal of maximizing human potential for optimal health.

Encompassed within the total scope of nursing practice, the associate degree nurse provides an integral service by assuming personal responsibility and accountability in the practice role components of: Provider of client care, manager of client care, and member within the discipline of nursing. The graduate is prepared to give direct care to individuals in a variety of structured settings. This graduate functions in concert with a multidisciplinary health care team that is prepared to diverse levels of expertise. Utilizing the nursing process, the associate degree nurse is accountable for providing cost effective evidence based quality care guided by the profession’s ethical and legal standards.

The educational process is a conjoint effort of faculty and students that fosters continued self-directed learning, critical thinking skills, and personal and professional growth. Nursing education is a dynamic process of interactions that occur between and among faculty and students. Knowledge is drawn from the natural, physical, and social sciences, and nursing to form the foundation of nursing practice.

The active process of learning occurs in the three domains: Cognitive, affective, and psychomotor. Learning is facilitated by active participation in the teaching-learning process, encouragement of creativity, fostering of critical thinking skills, reinforcement of desired behaviors, recognition of the diversity found among individuals, respect for individual worth, and use of a multisensory approach in teaching strategy. The progression of learning proceeds directionally from simple to complex concepts and relationships and from functional to dysfunctional systems. Accountability of the educational process is demonstrated by an outcome approach to teaching and assessment of student learning.

ADMISSION CRITERIA FOR NURSING PROGRAM

Enrollment in the Purdue University North Central nursing program is limited and not all qualified applicants may be offered admission. The applicant selection process utilized is based on objective criteria of applicant qualifications that serve to select the best candidates for admission from the pool of qualified individuals.

ADMISSION SELECTION CRITERIA

Selection criteria have been established for three categories of applicant admission into the nursing program, high school, change of degree objective (CODO) and transfer applicants. Selection criteria for each category requires a cumulative grade point average (GPA) equal to or greater than 2.5 on a 4.0 scale. Other criteria by category are

High School	CODO	Transfer
• Science GPA • Math GPA • High School Rank • SAT Scores	• GPA in required biology and chemsitry courses • Full- or Part-time pattern of course work	• Credit hours earned • Math/Science GPA • Credit Hours in required science courses • Full- or Part-time pattern of course work

HEALTH EXAMINATION

An initial physical examination and annual laboratory tests are required of all students enrolled in the nursing program to meet the contractual agreements of Purdue University North Central with the affiliating agencies utilized for clinical experiences throughout the program. The required physical examination form must be completed and received in the Nursing Department office by July 1 for Fall Semester admissions and by November 1 for Spring Semester admissions. Results of required annual laboratory tests must be received in the Nursing Department office by the specified date for student participation in clinical laboratory assignments.

CPR CERTIFICATION

Certification to perform cardiopulmonary resuscitation (CPR) is required of all students enrolled in the nursing program. The American Heart Association Level "C" course for health professionals is necessary to meet the certification requirement. CPR certification must be renewed annually. A copy of the current CPR certification card is to be received in the Nursing Department office by July 1 for Fall Semester admissions and by November 1 for Spring Semester admissions. Current CPR certification is required to participate in clinical agency experience.

LIABILITY INSURANCE

Students are required to participate in the University-wide nursing student liability insurance program. Liability insurance coverage is obtained through the University and fee payment is made with the Bursar's Office on the North Central campus. Fee statements are issued annually during the student's enrollment in the nursing program. Payment of fees must be received by the date indicated on the fee statement. Liability insurance is required to participate in clinical agency experience.

TRANSFER STUDENTS

Students transferring from another college or university must comply with the following admissions procedures:

- Submit an application for admission and an official high school transcript. High school transcripts are required of all students who do not hold a bachelor's degree.
- Forward official transcripts of work done in institutions previously attended (both high school and college). A separate transcript must be sent directly from each institution, regardless of whether credit is requested.
- A student transferring from another college, university, or Purdue campus may be admitted to the nursing program based on past academic performance and other relevant data. Criteria will be applied in a manner consistent with Nursing Department policies in effect at the time the application is submitted.
- Transfer applications from students who have completed a nursing course or courses at another institution will be considered on an individual basis. Qualified students will be admitted as space is available in the required nursing course(s). For further information, contact the Nursing Department chairperson.

To be eligible for consideration, students must meet the academic and subject-matter requirements and be in good academic and disciplinary standing at the college(s) previously attended.

CLINICAL LABORATORY

Clinical experiences are assigned in various health agencies in LaPorte, Porter, Lake, and the surrounding counties. Attempts are made to provide students with experiences in agencies that differ in size and client population to broaden student learning. Students must provide their own transportation to assigned agencies.

TRANSFER (OR ADVANCED) CREDIT

Credit for non-nursing courses at Purdue University will be given for work of equivalent character and amount successfully completed at another accredited college. Advance standing will be determined on the basis of these credits. Advanced credit will be regarded as provisional and may be withdrawn by the Office of Admissions upon recommendation of the department concerned if dependent work is not satisfactorily completed.

When credit earned at another college or university is transferred to Purdue and accepted toward advanced standing, the credit is converted into terms of Purdue courses and applied to the program of study. It does not follow that the student's classification in the University or the time necessary for completion of the required work for a degree will be in line with that which was expected at the previous institution. Grades are not transferred; only credit in the course is recorded.

Credit will not be granted for nursing or science courses taken more than five years ago or for general studies courses taken more than 10 years ago.

LPN CREDIT BY EXAMINATION (ADVANCED PLACEMENT)

A credit by examination advanced placement option is offered to Licensed Practical Nurses (LPN s) qualified to enter the Purdue University North Central associate degree nursing program. The National League for Nursing (NLN) RN Mobility Tests, parts I and II, are utilized to establish credit by examination. Successful performance on both tests establishes credit for a maximum of 12 credit hours of nursing course work. A fee is charged by the NLN for administration of each test. For further information, contact the Nursing Department chairperson.

General Plan of Study: Nursing

FIRST SEMESTER			
Course	Cr.	Cl.	Lab.
BIOL 213	4	3	2
Human Anatomy & Physiology			
CHM 119	3	2	3
General Chemistry			
PCTX 201	3	3	0
Introductory Pharmacology			
NUR 118	1	1	0
Perspectives in Nursing			
NUR 119	2	1	3
Nursing Assessment			
NUR 123	4	2	6
Nursing Foundations ____			
Total Credits	17		

THIRD SEMESTER			
Course	Cr.	Cl.	Lab.
NUR 214	3	3	0
Introduction to Pathophysiology			
NUR 232	3	2	3
Nursing Care of Infants, Children, and Adolescents)			
NUR 233	4	2	6
Nursing Care of Adults			
NUR 235	1	1	0
Nursing Issues			
SOC 100	3	3	0
Introductory Sociology			
PSY 120	3	3	0
Elementary Psychology			
Total Credits	17		

SECOND SEMESTER			
Course	Cr.	Cl.	Lab.
BIOL 214	4	3	2
Human Anatomy & Physiology			
BIOL 221	4	3	2
Introduction to Microbiology			
NUR 208	2	2	0
Lifespan Human Development			
NUR 230	1	1	0
Personal Expression in Nursing			
NUR 231	3	2	3
Nurs. Care of Developing Families			
ENGL 101	3	3	0
English Composition I ____			
Total Credits	17		

FOURTH SEMESTER			
Course	Cr.	Cl.	Lab.
NUR 234	4	2	6
Psychosocial Nursing Care			
NUR 236	1	1	0
Transition to Nursing Practice			
NUR 237	6	2	12
Nursing Synthesis			
F&N 303	3	3	0
Essentials of Nutrition			
Elective	3	3	0
Total Credits	17		

Total credits required for degree: 68 (General Education credits: 33; Nursing Education credits: 35)

ADDITIONAL INFORMATION

All the curricular requirements of the Purdue University North Central associate degree nursing program must be completed within six regular (Fall & Spring) semesters after beginning the nursing (NUR) sequence.

Credit for courses in nursing and science will be considered valid to meet the degree requirements for five years. Credit for other general education requirements will be considered valid for ten years.

Three NUR courses, NUR 118, NUR 119, and NUR 123, and a pharmacology course, PCTX 201, are required to be completed prior to progression to any other NUR clinical courses. Two NUR courses, NUR 236 and NUR 237, are required to be taken in the last or terminal semester of the nursing program. All other courses may be taken in varied combination or sequence if the prerequisites or corequisite requirements for the individual courses are met. All course work required for the degree must be completed by the end of the semester in which NUR 236 and NUR 237 are taken.

PROGRESSION REQUIREMENTS:

A student must be enrolled in a clinical nursing course each semester in order to progress and remain in the nursing program. In addition to the University scholastic requirements, the nursing program requires that any student earning a grade lower than a C in a nursing, science, or pharmacology course must repeat that course satisfactorily. One nursing course may be repeated one time only. Failure to earn a grade of C or better in two (2) nursing course attempts or in any three (3) required non-nursing courses will result in dismissal from the nursing program.

Basic skills in mathematics and proficiency in drug dosage calculations are required throughout the nursing program.

CONTINUATION FOR BACHELOR'S DEGREE IN NURSING

Purdue University North Central and Valparaiso University have joined in a cooperative public/private partnership wherein registered nurses who have an Associate of Science in Nursing degree from Purdue University North Central are eligible to work toward a Bachelor of Science in Nursing degree from Valparaiso University while paying the fees normally charged by Purdue University North Central. The cost difference in fees is subsidized by the State of Indiana. Students interested in the program may contact the Valparaiso University Office of Admissions.

The Bachelor of Science degree in nursing is also available at the West Lafayette, Calumet and Fort Wayne campuses of Purdue University.

The faculty reserves the right to update and otherwise revise the curriculum of the associate degree nursing program. Such information will be transmitted through notices and publications.

BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES

For the student who wishes to major in the biological sciences Purdue University North Central offers several options:

- General Biology
- Biology with a concentration in
 - Ecology
 - Microbiology
 - Pre-Dentistry
 - Pre-Medicine (including optometry and physical therapy)
 - Pre-Veterinary Medicine
- A Chemistry minor for biology majors

Also, students have a unique opportunity to participate in undergraduate research and independent study on campus and at Purdue University North Central's Ecology Research Field Station within the Indiana Dunes National Lakeshore.

MISSION

The primary mission of the Biological Sciences and Chemistry Department is one of teaching and service to residents of LaPorte, Porter, and Stark counties. The department also has an important mission in conducting research in which undergraduate students are encouraged to participate.

Further, the general education experience at Purdue University North Central is fundamental to the primary and secondary missions of the Biological Sciences and Chemistry Department. General education is that component of the undergraduate curriculum at this campus devoted to those areas of knowledge, methods of inquiry, and ideas fundamental and common to all well-educated individuals. It is embedded in and enhanced by courses throughout the specific program of studies offered by this section, including the Bachelor of Science in the biological sciences and the Associate of Science in science. This experience encourages students to develop the ability to represent views clearly and cogently, analyze, think critically, and formulate reasoned conclusions.

OVERVIEW

The biological sciences are undergoing an extraordinary revolution, and the plans of study are formulated to give students a broad basis for comprehending the diverse nature of this field. Biology builds upon this knowledge and tries to understand the complex organization that gives rise to biological organizations and ultimately, to biological diversity. Our curriculum is designed so that this basic biological knowledge can readily be applied to critical practical problems in health and medicine, agriculture and the management of other renewable resources, and the nature of populations and their control.

The amount of information that is currently being discovered in the biological world is daunting, and we recognize that some students may want to focus within an area of specialization. Students begin our curriculum with a four-semester biology core. These courses provide a common knowledge base for all biology majors. The sequence begins with an overview of evolutionary, environmental, and organismal concepts, and then proceeds to examine relationships between development, structure, and function as adaptational mechanisms. The third and fourth semesters are concerned with cellular organization and function followed by genetic and molecular principles so important to modern biology.

Third and fourth year students have acquired a background in chemistry, mathematics and physics in addition to the common body of biological knowledge and laboratory skills. Students must take courses in four areas of Biology: Molecular and Cellular, Structure & Function, Evolution, and Ecology & Environmental. Students have considerable leeway in choosing courses from these groups and this allows students to pursue their interests within the broadly defined areas. This system promotes and reinforces an understanding of the breadth of modern biology. However, in some pre-professional programs (Preveterinary Medicine, Predentistry) or Biology Major options (Microbiology, Ecology) some courses are required for graduation and this somewhat restricts choices. All majors must complete a minimum of 15 credit hours of upper division courses exclusive of BIOL 407 (Capstone) and x95 (special assignments or research) courses. At least one of these courses must have a formal laboratory component. Courses acceptable for satisfying this laboratory requirement are marked with an * in lists of upper division biology courses. If minimal requirements are met, approximately 11 credit hours of electives remain to meet the 124 credit hours mandated by Purdue University for a Bachelor of Science Degree. Majors are encouraged to take additional elective courses or participate in research to increase their knowledge or expertise in Biological Science.

In addition, undergraduate research is emphasized, so that all students have an opportunity to perform independent research. Many students who participate in this program have written undergraduate honors theses; presented their findings at local, state, regional and national scientific meetings; and been co-authors on papers in scientific journals.

Finally, the Biological Sciences and Chemistry Department has developed a student-centered environment to enable all students to succeed. In the first semester, students take a resources and problem-solving (freshman experience) seminar that is coordinated with the first-semester biology lecture and lab course, BIOL 121 and 122. This seminar facilitates a student's transition from high school to the university setting. A second seminar, titled The Senior Capstone Experience is required the spring of the senior year. This seminar is a synthesis course which is designed to allow a student the opportunity to utilize all his/her skills to solve real world problems within the area of the biological sciences. This course is also used by the faculty to assess and improve the curricular components of the biology degree program.

SPECIAL PROGRAMS AND OPPORTUNITIES

Honors Research Program. The Biological Sciences and Chemistry Department sponsors an honors research program to supplement the formal course offerings in the section's degree programs, to increase the breadth and depth of the student's knowledge of modern biology, and to lead to an honors in research degree in biology at graduation. The program offers guided study in biology through independent research.

The requirements for graduation with honors in research are:

- At least a 3.0 cumulative graduate index.
- Completion of an honors research thesis (BIOL 499) supervised and approved by a member of the biology faculty or by a scientist approved by the Honors Committee, and approved by the Honors Committee and the section chairperson.
- Presentation of an honors seminar (BIOL 497) describing the research.

Special Assignments (BIOL X95). Students who would like to undertake special study in areas not available through formal course work offered by the section are strongly encouraged to contact a faculty member whose work is in the area of their interest and arrange to enroll in special assignment courses: BIOL 295, 395 or 495. The special study can be: directed readings; independent study, undergraduate research; supervised library, laboratory, or field work; or discussions. Credit will be given for the work, and a title of the area investigated will appear on the transcript. These courses can be repeated for credit. Undergraduate research is emphasized and encouraged at Purdue University North Central.

National Biology Honor Society. In 1988, Purdue University North Central was granted a local chapter (XI RHO) of the Beta Beta Beta honor society. It is for students, particularly undergraduates, dedicated to improving the understanding and appreciation of biological study and extending boundaries of human knowledge through scientific research. Since its founding in 1922, more than 145,000 persons have been accepted into lifetime membership, and more that 380 chapters have been established throughout the United States and Puerto Rico.

Associate of Science. Purdue University North Central also offers an Associate of Science degree with Biology or Chemistry Concentration, requiring 64 credits. See the Associate Degree section of this bulletin for more information.

Undergraduate research. Students are strongly encouraged to become involved in undergraduate research or independent studies (i.e. BIOL 295, 395, 595, 595). Contact a Biology/Chemistry faculty member for specific information about these opportunities. Undergraduate research and independent study courses are listed as: BIOL 295, 395, 495, and 595. These courses are for 1 to 4 credit hours per semester.

PROFESSIONAL OPPORTUNITIES

Purdue educated biologists function in many ways: as technicians, technologists, and scientists in industry, government, hospitals, and academic institutions; as teachers in high schools and community colleges; and, given additional talents and training, as science writers, editors, illustrators, and sales personnel in pharmaceutical, hospital, and scientific supply industries. Many graduates later earn a Master of Science or Ph.D. degree, preparing them for positions that involve teaching and research in universities or in industrial or medical laboratories. A basic education in biology is good preparation for advanced work in various aspects of applied pharmacy agriculture, dentistry, medicine, genetic counseling, marine biology, optometry, veterinary medicine, behavioral sciences, biomedical and environmental engineering, forestry, and wildlife, range, and water management.

GENERAL GRADUATION REQUIREMENTS FOR BACHELOR OF SCIENCE IN BIOLOGY

- Completion of the specified plan of study.
- Minimum of 124 semester hours completed as specified by the plan of study.
- Completion of at least 32 semester hours of Purdue University credit approved for the degree; these courses are expected to be at the 300 level or above.
- A 2.0 grade point average in all biology and biology elective courses required for the degree. This includes courses outside of biology (e.g., botany; forestry and natural resources).
- A minimum graduation index of 2.0.

It is the student's responsibility to know and follow the specified degree plan of study. Failure to do so will delay or prevent graduation.

If the student is interested in transferring to another university, it is the student's responsibility to contact the university of interest relative to admissions, transferability, and degree requirements.

GENERAL DEGREE REQUIREMENTS

The biology core consists of courses required of all undergraduate majors. The sequence begins with the Freshman Experience Seminar in conjunction with an overview of the evolutionary development of organismal diversity and ways organisms interact with their environment and each other. That is followed by a course that introduces the principles of plant and animal development and explores the relationship between their structure and function. The third course includes the study of how cells are structurally organized and how they function. Students are then introduced to the principles of genetics and the molecular mechanisms of gene expression, mutation and replication. Finally, in the senior year, students are given the opportunity to solve real word problems via the Senior Capstone Experience seminar.

In addition to the course and elective biology courses, students majoring in biology must take certain courses in chemistry, mathematics, and physics, as well as English, foreign language, humanities, and the social sciences. In meeting the various requirements, a student automatically fulfills the School of Science graduation requirements.

A student wishing to graduate with a degree in biology must have a 2.0 grade point average in all biology and biology elective courses required for his or her major or specialization. This may include courses outside of the biological sciences if such courses fulfill biology or biology elective requirements for that major or specialization (e.g. botany; forestry and natural resources).

Students majoring in the biological sciences have the choice of focusing or broadening their education by the selection of electives; courses are offered in many aspects of biology. Usually, students take these specialized courses after the sophomore year. It is advantageous for a student to decide by the sophomore year what aspect of the biological sciences he or she wants to emphasize in order to begin the correct sequence of courses required by each major.

Course Requirements: For ALL Biology Majors

The following courses are required for all degrees and concentrations in the biological sciences. In addition, a block of special courses is required for each concentration.

A minimum of 124 total credits are necessary to graduate. This must include:

- At least 32 credit hours of Purdue University (non-transfer) credit.
- At least 32 credit hours at the 300 level or above
- 2.0 grade point average in all Biology courses.
- A minimum graduation index of 2.0.

ENGLISH (6 credits)

3	ENGL 101	English Composition I
3	ENGL 102	English Composition II

PHYSICS (8 credits)

4	PHYS 220	General Physics I
4	PHYS 221	General Physics II

FOREIGN LANGUAGE (12 credits)

3	FL 101	Foreign Language
3	FL 102	Foreign Language
3	FL 201	Foreign Language
3	FL 202	Foreign Language

MATHEMATICS (12 credits)

3	MA 223	Introductory Analysis I
3	MA 224	Introductory Analysis II
3	CS 220	Programming for Engineers and Scientists
3	STAT 503	Statistical Methods for Biology or MA 161, 162 + GS220 or STAT 503

HUMANITIES AND SOCIAL SCIENCES (18 credits)

A. 6 credits; select one two-course sequence

6	HIST 151/152	American History to 1877/United States Since 1877
6	ENGL 255/267	World Literature: From the Beginnings to 1700A.D./ World Literature: From 1700 A.D.to the Present)
6	ENGL 350/351	Survey of American Literature: From Its Beginnings to 1865/Survey of American Literature: From 1865 to the Post-World War II Period
6	IDIS 435/436	Great Issues I/Great Issues II

B. 6 credits

3	PSY 120	Elementary Psychology
3	SOC 100	Introductory Sociology

C. 6 credits; select two

3	POL 101	American Government and Politics
3	ECON 210	Principles of Economics
3	PHIL 110	Introduction to Philosophy
3	COM 114	Fundamentals of Speech Communication

CHEMISTRY (20 credits)

4	CHM 115	General Chemistry
4	CHM 116	General Chemistry
4	CHM 255/255L	Organic Chemistry & Lab
4	CHM 256/256L	Organic Chemistry & Lab
4	CHM 321	Analytical Chemistry I

If you also take CHM 372, Physical Chemistry, (4 credits) you can obtain a minor in chemistry.

BIOLOGY CORE (22 credits)

1	BIOL 114	Freshman Experience (corequisite BIOL 121)
4	BIOL 121/122	Biology I: Diversity, Ecology and Behavior & Lab
5	BIOL 131/132	Biology II: Development, Structure & Function & Lab
5	BIOL 231/232	Biology III: Cell Structure and Function & Lab
5	BIOL 241/242	Biology IV: Genetics and Molecular Biology & Lab
2	BIOL 407	Senior Capstone Experience

ADDITIONAL REQUIREMENTS (See following page)

ADDITIONAL REQUIREMENTS**General Biology Major (15+ credits excluding BIOL x95 courses)**

Choose at least one from each of the groups below, at least one laboratory course, and at least one 500 level biology course.

MOLECULAR & CELLULAR

3	BIOL 322	Microbiology
2	BIOL 323	Lab in Microbiology
3	BIOL 415	Molecular Biology
3	BIOL 411	Lab in Molecular Biology
3	BIOL 529	Bacterial Physiology
3	BIOL 533	Medical Microbiology
2	BIOL 534	Lab in Medical Microbiology
3	BIOL 537	Immunobiology
3	CHM 333	Biochemistry
3	CHM 533	Biochemistry

STRUCTURE & FUNCTION

5	BIOL 404	Gross Anatomy
4	BIOL 410	Human Physiology
3	BIOL 455	General & Comparative Physiology
1	BIOL 456	Lab in Gen & Comp Physiology
3	BIOL 466	Developmental Biology
3	BIOL 505	Invertebrate Biology
4	BIOL 513	Advanced Human Anatomy
4	BIOL 531	Parasitology
3	BTNY 210	Intro to Plant Sciences

EVOLUTION

3	BIOL 580	Evolution
3	BIOL 592	Evolution of Behavior
3	BIOL 597	Sex and Evolution

ECOLOGY & ENVIRONMENTAL

3	BIOL 483	Environmental & Conservation Biology
3	BIOL 585	Ecology
3	BTNY 555	Aquatic Botany
2	FNR 388	Ichthyology
1	FNR 389	Ichthyology Laboratory
3	FNR 501	Limnology
3	FNR 540	Wetlands Ecology
3	FNR 543	Conservation Biology

Other upper-level courses may be available; check with your advisor.

FREE ELECTIVES (approximately 11 credits)

Additional upper-level biology courses are encouraged.

Ecology Concentration

(15+ credits excluding BIOL x95 courses)

REQUIRED

3	BIOL 580	Evolution
3	BIOL 585	Ecology
3	FNR 501	Limnology
3	BTNY 555	Aquatic Botany
3	FNR 540	Wetland Ecology

RECOMMENDED

5	BIOL 322/323	Microbiology & Lab
4	BIOL 531	Parasitology
3	BIOL 592	The Evolution of Behavior
3	BIOL 597	Sex and Evolution
3	CHM 533	Introductory Biochemistry
3	FNR 388/389	Ichthyology & Lab

Other upper-level courses may be available; check with your advisor.

FREE ELECTIVES (approximately 11 credits)

Additional upper-level biology courses are encouraged.

Microbiology Concentration

(15+ credits excluding BIOL x95 courses)

REQUIRED

5	BIOL 322/323	Microbiology & Lab
5	BIOL 533/534	Medical Microbiology & Lab
4	BIOL 531	Parasitology
3	BIOL 537	Immunobiology

RECOMMENDED

3	BIOL 580	Evolution
3	CHM 533	Introductory Biochemistry

Other upper-level courses may be available; check with your advisor.

FREE ELECTIVES (approximately 11 credits)

Additional upper-level biology courses are encouraged.

Predentistry Concentration

(15+ credits excluding BIOL x95 courses)

See General Biology Major Groups

REQUIRED

9	BIOL 404	Gross Anatomy
4	BIOL 455/456	Animal Physiology & Lab or
4	BIOL 410	Molecular Biology
3	CHM 533	Introductory Biochemistry

RECOMMENDED

5	BIOL 322/323	Microbiology & Lab
5	BIOL 533/534	Medical Microbiology & Lab

Other upper-level courses may be available; check with your advisor.

FREE ELECTIVES (approximately 11 credits)

Additional upper-level biology courses are encouraged.

Premedicine Concentration

(15+ credits excluding BIOL X95 courses)

See General Biology Major groups

The following courses are strongly recommended for all Pre-Medicine students.

5	BIOL 404	Gross Anatomy
4	BIOL 410	Molecular Biology
5	BIOL 322/323	Microbiology & Lab
5	BIOL 533/534	Medical Microbiology & Lab
3	BIOL 537	Immunobiology
3	CHM 533	Introductory Biochemistry
3	BIOL 415	Molecular Biology

FREE ELECTIVES (approximately 11 credits)

Additional upper-level biology courses are encouraged.

Preveterinary Medicine Concentration

(15+ credits excluding BIOL x95 courses)

See General Biology Major groups

REQUIRED

3	ECON 210	Principles of Economics
3	COM 114	Fundamentals of Speech Communication
3	CHM 533	Introductory Biochemistry
5	BIOL 404	Gross Anatomy
4	BIOL 455/456	Animal Physiology & Lab or
4	BIOL 410	Molecular Biology

RECOMMENDED

5 BIOL 322/323 Laboratory in Microbiology

Other upper-level courses may be available; check with your advisor.

FREE ELECTIVES (approximately 11 credits)

Additional upper-level biology courses are encouraged.

CHEMISTRY MINOR FOR BIOLOGY MAJORS

PREREQUISITES

4	CHM 115	General Chemistry
4	CHM 116	General Chemistry
10	MA 161/162	Plane Analytic Geometry and Calculus I, II or
6	MA 223/224	Introductory Analysis I, II

COURSES FOR MINOR (at least 16 credits beyond general chemistry, CHM 115/116)

Group A: Organic Chemistry (8 credits)

4	CHM 255/255L	Organic Chemistry/Laboratory or
	CHM 261/263	Organic Chemistry/Laboratory
4	CHM 256/256L	Organic Chemistry/Laboratory or
	CHM 262/264	Organic Chemistry/Laboratory

Group B: Analytical Chemistry (4 credits)

4	CHM 321	Analytical Chemistry I
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Group C: Physical Chemistry (4 credits)

4	CHM 372	Physical Chemistry
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ADDITIONAL OPTION (3 credits)

3	CHM 533	Introductory Biochemistry
(Does not replace Group A-C requirement)		

ASSOCIATE OF SCIENCE DEGREE

With emphasis in certain Science and Engineering fields

This degree program is offered at the North Central campus in conjunction with the School of Science of Purdue University at West Lafayette. The curricula for the various disciplines is essentially equivalent to the first two years of the prescribed baccalaureate degree programs.

Total credits required for associate degree: 64, distributed as follows:

CORE REQUIREMENTS (43 credits)

- 9 Written and Oral Communication
- 9 Mathematics (Calculus Level)
- 16 Science
- 3 Computer
- 6 Humanities and Social Sciences

PROFESSIONALLY PERTINENT ELECTIVES (21 credits)

Electives include sophomore level discipline-specific courses such as science, mathematics, or engineering courses, as well as, other general education courses such as foreign language sequences if these are required in the student s four-year plan of study.

The program of study is designed to enable the student who plans to transfer to another Purdue University campus or other college or university to complete a baccalaureate degree in one of the sciences or in engineering to earn an associate degree at the North Central campus. The sample programs of study detailed below are essentially the first two years of baccalaureate programs in science available at the West Lafayette campus of Purdue University. Students who plan to transfer to other colleges or universities may develop a plan of study for the associate degree with their academic advisors which will conform to the program requirements of the intended transfer institution.

Students in certain agriculture, engineering or health science programs may be able to earn the associate degree. A program of study should be developed with the academic advisor for the School of Science on the North Central campus.

CONTINUING BEYOND THE ASSOCIATE OF SCIENCE DEGREE

Biology majors can continue with the Bachelor of Science program in biology on the Purdue North Central campus. Others can complete a baccalaureate degree in Liberal Studies at Purdue North Central. Students transferring to other colleges and universities should be able to complete a baccalaureate degree in two years if the course work for the associate degree is selected with the requirements of the intended transfer college in mind.

Sample Plans of Study: Associate of Science Degree

Biology Concentration

If you wish to complete the School of Science foreign language (FL) requirement as part of the Associate of Science degree, you must take a FL course each semester.

FRESHMAN YEAR

First Semester

3	ENGL 101	English Composition I
4	BIOL 121/122	Biology I: Diversity, Ecology and Behavior
4	CHM 115	General Chemistry
3	MA 223	Introductory Analysis I
<u>3</u>	General Ed.	Foreign Languages, Humanities or Social Sciences
17		

Second Semester

3	ENGL 102	English Composition II
4	BIOL 131/132	Biology II: Development, Structure and Function of Organisms
4	CHM 116	General Chemistry II
3	MA 224	Introductory Analysis II
<u>3</u>	General Ed.	Foreign Languages, Humanities or Social Sciences
17		

SOPHOMORE YEAR

Third Semester

3	STAT 503	Statistical Methods for Biology
5	BIOL 231 / 232	Biology III: Cell Structure & Function
4	CHM 255 / 255L	Organic Chemistry
<u>3</u>	COM 114	Fundamentals of Speech Communication or
15		

Fourth Semester

5	BIOL 241 / 242	Biology IV: Genetics & Molecular Biology
4	CHM 256 / 256L	Organic Chemistry
3	General Ed.	Foreign Languages, Humanities or Social Sciences
<u>3</u>	CS 220	Programming I for Engineers and Scientists
15		

Chemistry Concentration

If you wish to complete the School of Science foreign language (FL) requirement as part of the Associate of Science degree, you must take a FL course each semester.

FRESHMAN YEAR

First Semester

3	ENGL 101	English Composition I
5	MA 161	Plane Analytic Geometry & Calculus I
4	CHM 115	General Chemistry
<u>6</u>	General Ed.	Foreign Languages, Humanities or Social Sciences
18		

Second Semester

3	ENGL 102	English Composition II
5	MA 162	Plane Analytic Geometry & Calculus II
4	CHM 116	General Chemistry
<u>4</u>	PHYS 152	Mechanics
16		

SOPHOMORE YEAR

Third Semester

3	COM 114	Fundamentals of Speech Communication
4	CHM 261/263	Organic Chemistry
4	MA 261	Multivariate Calculus
<u>3</u>	General Ed	Foreign Languages, Humanities or Social Sciences
14		

Fourth Semester

4	CHM 262 / 264	Organic Chemistry
4	MA 262	Linear Algebra and Differential Equations
5	PHYS 251	Heat, Electricity and Optics
<u>3</u>	CS 220	Programming I for Engineers and Scientists
16		

Engineering Concentration

See Technology Academic Advisor

Mathematics Concentration

If you wish to complete the School of Science foreign language (FL) requirement as part of the Associate of Science degree, you must take a FL course each semester.

FRESHMAN YEAR

First Semester

5	MA 161	Plane Analytic Geometry & Calculus I
3	ENGL 101	English Composition I
4		Laboratory Science
<u>3</u>		Humanities or Social Sciences Elective
15		

Second Semester

5	MA 162	Plane Analytic Geometry & Calculus II
3	ENGL 102	English Composition II
4		Laboratory Science
<u>3</u>		Humanities and Social Science Elective
15		

SOPHOMORE YEAR

Third Semester

4	MA 261	Multivariate Calculus
4		Laboratory Science
3		Professionally Pertinent Elective
3	COM 114	Fundamentals of Speech Communication
<u>3</u>	CS 220	Programming I for Engineers and Scientists
17		

Fourth Semester

4	MA 262	Linear Algebra and Differential Equations
3	MA 351	Elementary Linear Algebra
3-4		Laboratory Science
<u>6</u>		Professionally Pertinent Elective
16-17		

Physics Concentration

If you wish to complete the School of Science foreign language (FL) requirement as part of the Associate of Science degree, you must take a FL course each semester.

FRESHMAN YEAR

First Semester

5	MA 161	Plane Analytic Geometry & Calculus I
3	ENGL 101	English Composition I
4	CHM 115	General Chemistry
<u>3</u>		Humanities or Social Sciences Elective
15		

Second Semester

5	MA 162	Plane Analytic Geometry & Calculus II
3	ENGL 102	English Composition II
4	CHM 116	General Chemistry
<u>4</u>	PHYS 152	Mechanics
16		

SOPHOMORE YEAR

Third Semester

4	MA 261	Multivariate Calculus
5	PHYS 251	Heat, Electricity, and Optics
3	CS 220	Programming I for Engineers and Scientists
3	COM 114	Fundamentals of Speech Communication
<u>3</u>		Professionally Pertinent Electives
18		

Fourth Semester

4	MA 262	Linear Algebra and Differential Equations
3	PHYS 342	Modern Physics
3		Humanities or Social Sciences Elective
<u>6</u>		Professionally Pertinent Electives
16		

Statistics Concentration

If you wish to complete the School of Science foreign language (FL) requirement as part of the Associate of Science degree, you must take a FL course each semester.

FRESHMAN YEAR

First Semester

5	MA 161	Plane Analytic Geometry & Calculus I
3	ENGL 101	English Composition I
4		Laboratory Science
<u>3</u>		Humanities or Social Sciences Elective
15		

Second Semester

5	MA 162	Plane Analytic Geometry & Calculus II
3	ENGL 102	English Composition II
4		Laboratory Science
<u>3</u>		Humanities or Social Sciences Elective
15		

SOPHOMORE YEAR

Third Semester

4	MA 261	Multivariate Calculus
3	STAT 225	Introduction to Probability Models
3-4	STAT 350	Laboratory Science
3	COM 114	Fundamentals of Speech Communication
<u>4</u>	CS 220	Programming I for Engineers and Scientists
16-17		

Fourth Semester

4	MA 262	Linear Algebra and Differential Equations
3	MA 351	Elementary Linear Algebra
3	STAT 350	Introduction to Statistics
3-4		Laboratory Science
<u>3</u>		Professionally Pertinent Electives
16-17		

The Statistics Minor on the Purdue University North Central campus is intended to give students majoring in other disciplines (e.g. Biology, Business) on the PNC campus an introduction to statistical ideas and methods. Five statistics courses are required to complete a statistics minor as indicated below.

- ¥ An introductory statistics course: STAT 350, 503, 511
- ¥ An introductory probability course: STAT 225
- ¥ Applied regression analysis: STAT 512
- ¥ Two of the following courses (others may also be approved, see your advisor): STAT 513, 514, 522, 524

For a comparable statistics minor on the West Lafayette campus, contact the Statistics Department.

Technology-Physics Concentration

If you wish to complete the School of Science foreign language (FL) requirement as part of the Associate of Science degree, you must take a FL course each semester.

FRESHMAN YEAR

First Semester

5	MA 161	Plane Analytic Geometry & Calculus I
3	ENGL 101	English Composition I
4	CHM 115	General Chemistry
3	MET 141	Materials I
<u>3</u>	CGT 110	Computer Graphics Communication
18		

Second Semester

5	MA 162	Plane Analytic Geometry & Calculus II
3	ENGL 102	English Composition II
4	CHM 116	General Chemistry
<u>4</u>	PHYS 152	Mechanics
16		

SOPHOMORE YEAR

Third Semester

4	MA 261	Multivariate Calculus
5	PHYS 251	Heat, Electricity, and Optics
3	MET 242	Manufacturing Processes II
<u>3</u>	COM 114	Fundamentals of Speech Communication
15		

Fourth Semester

4	MA 262	Linear Algebra and Differential Equations
3	PHYS 342	Modern Physics
6		Humanities or Social Sciences Elective
<u>3</u>	CS 220	Programming I for Engineers and Scientists
16		

TRANSFER PROGRAMS

One of the traditional missions of Purdue University North Central is to provide the first four or more semesters of academic work leading to a variety of bachelor's degree options. The student who desires to do so may complete a portion of the coursework leading to many of the bachelor's degrees available on the several campuses of Purdue University.

By working closely with an academic advisor, a student may also complete as much as one-half of an academic program leading to junior standing in most colleges and universities in the United States.

Because Purdue University is accredited by the North Central Association of Colleges and Schools, all courses completed with a grade of C or better are likely to be accepted at the college of the student's choice. However, because requirements vary among universities, it is prudent to verify the appropriateness of all courses taken during the freshman and sophomore year with the university of intended upper division attendance. Academic advisors will assist in the choice of courses when they are aware of the student's ultimate educational objective.

The following pages list some of the options available on other campuses of Purdue University and give sample programs for the first four semesters of such curricula. These are generally described in terms of requirements for the degrees on the West Lafayette campus. Because of slight variations between programs on different campuses of Purdue University, students should verify the appropriateness of the listed programs with the campus of intended registration. Since the listed sample programs for the freshman and sophomore year do not lead to degrees, they are given for guidance only and substitutions to meet particular variations anticipated in junior and senior year programs may be made freely.

Purdue University North Central students who intend to complete baccalaureate work at another Purdue campus are encouraged to review the appropriate campus bulletin. The Dean of Students Office will assist in acquiring these materials.

AGRICULTURE PROGRAMS

The School of Agriculture at the West Lafayette campus offers more than 40 programs of study leading to the degrees of Bachelor of Science, Bachelor of Science in Forestry, and Bachelor of Science in Landscape Architecture. Detailed descriptions of degree requirements, departmental requirements, and specific programs can be found in the bulletin of the School of Agriculture, West Lafayette.

Two semesters of the eight semesters required for most of the above programs may be completed at Purdue University North Central. These transfer programs are administered by the Biological Sciences and Chemistry Department. For information, contact the agriculture advisor or the department office.

General Plan of Study: Agriculture

There are variations in the plans of study for the various options. Students should obtain a current School of Agriculture catalog from West Lafayette and see their agriculture advisor for further information.

FRESHMAN YEAR

First Semester

2	BIOL 121	Biology I: Diversity, Ecology, and Behavior
2	BIOL 122	Laboratory in Biology I
3	CHM 111+	General Chemistry
3	ENGL 101	English Composition I
3	MA 223++	Introductory Analysis
<u>3</u>		Elective
16		

Second Semester

2	BIOL 131	Biology II: Development, Structure, & Function of Organisms
2	BIOL 132	Laboratory in Biology II
3	CHM 112	General Chemistry
3	ENGL 102	English Composition II
3	MA 224	Introductory Analysis II
<u>3</u>		Elective
16		

SOPHOMORE YEAR

Third & Fourth Semester

See the agriculture advisor for an appropriate plan of study for these semesters.

+ Some agriculture options require CHM 115/116; if interested in the Associate of Science degree, CHM 115 and CHM 116 must be taken.

++ MA 153/154 will not count toward graduation, but should be taken if a student is not prepared for MA 223/224.

General Plan of Study: Preforestry
FRESHMAN YEAR

First Semester

2	BIOL 121	Biology I: Diversity, Ecology, and Behavior
2	BIOL 122	Laboratory in Biology I
3	CHM 111	General Chemistry
3	ENGL 101	English Composition I
3	MA 223++	Introductory Analysis
<u>3</u>		Humanities-Social Sciences Elective
16		

Second Semester

3	BIOL 131	Biology II: Development, Structure, & Function of Organisms
2	BIOL 132	Laboratory in Biology II
3	CHM 112	General Chemistry
3	ENGL 102	English Composition II
3	MA 224	Introductory Analysis II
<u>3</u>	COM 114	Fundamentals of Speech Communication
17		

General Plan of Study: Preveterinary Medicine+

See Purdue University North Central's B.S. in Biology, p. 100. Students who complete the preveterinary program cannot be assured of admission to veterinary school.

+ Students are encouraged to complete the bachelor of science degree in biology before applying to the School of Veterinary Medicine.
++ MA 153/154 will not count toward graduation, but should be taken if a student is not prepared for MA 223/224.

CONSUMER AND FAMILY SCIENCES

The primary purpose of the School of Consumer and Family Sciences at Purdue University s West Lafayette campus is the intellectual development of its students and their preparation for professional services to the family and consumer. Four departments make up the school: Child Development and Family Studies, Consumer Sciences and Retailing, Foods and Nutrition, and Hospitality and Tourism Management. For details of the many programs available visit: www.cfs.purdue.edu . Degree options are available in the following areas:

CHILD DEVELOPMENT AND FAMILY STUDIES

Early Childhood Education and Intervention (ECEI)
with Child Health Specialization
Individual and Family Studies
Youth, Adult, and Family Services

CONSUMER SCIENCES AND RETAILING

Apparel Design and Technology	Retail Management
Financial Counseling	Selling and Sales Management
Small Business	

FOODS AND NUTRITION

Coordinated Program in Dietetics	Foods and Nutrition in Business
Didactic Program in Dietetics	Nutrition, Fitness, and Health
Food Science	Nutrition Science- Premedicine

INTERDISCIPLINARY OPTIONS

Consumer and Family Sciences Education
Family and Consumer Sciences Education
Occupational Family and Consumer Sciences Education

Regional Campus Transfers to the School of Consumer and Family Sciences (CFS)

Students may begin their coursework at Purdue North Central campus, and apply for a regional campus transfer to the School of Consumer and Family Sciences (CFS). The program requirements are highly degree specific; therefore, only a small core of courses can be taken at Purdue North Central before transferring to CFS. For details on courses, as well as information on prerequisites courses needed and major-specific requirements, see the bulletin for the School of Consumer and Family Sciences or visit www.cfs.purdue.edu. The academic advisor of the PNC Business Department assists students in choosing from the following courses:

- | | |
|----------|--------------------------------------|
| ENGL 101 | English Composition I |
| ENGL 102 | English Composition II |
| COM 114 | Fundamentals of Speech Communication |
| PSY 120 | Elementary Psychology |

SOC 100 Introductory Sociology
Chemistry and Biology*
Computer Sciences*
Mathematics*

*Courses vary depending upon the major chosen. See the Academic Advisor for the Business Department.

HEALTH SCIENCES PROGRAMS

Students interested in the Health Sciences may also be interested in the Associate of Science biology concentration and the Bachelor of Science in biology offered at Purdue North Central.

The School of Health Sciences at West Lafayette offers a variety of study areas, including medical technology, health physics, environmental and occupational safety and health, environmental toxicology, environmental assessment, and related environmental health programs. It also administers the prepharmacy program. Students completing the school's programs and gaining experience in the field may qualify for professional certification.

The first four semesters and possibly an additional two semesters of many of the programs are available at the North Central campus. The student should contact an advisor to determine if a third year of course work is available in a specific option. If planning to transfer to the West Lafayette campus to complete a program of study, the student should consult the School of Health Sciences bulletin.

Undergraduate plans of study are offered in the following disciplines:

Prepharmacy. A preprofessional curriculum for students who wish to apply for admission to the professional program in the School of Pharmacy and Pharmacal Sciences. The School of Pharmacy and Pharmacal Sciences does not admit students directly from high school; therefore, students who expect to apply for admission to this school, should enroll as a prepharmacy student in the School of Health Sciences.

Medical Technology. A branch of medicine concerned with the performance of clinical laboratory tests that provide information to aid physicians in the diagnosis and treatment of disease.

Occupational Safety and Health (Industrial Hygiene). The study of hazardous materials and conditions in the industrial environment with emphasis on the control of factors that affect our general health and well-being.

Preallied Health. A preprofessional curriculum for students who wish to apply for admission to allied health programs at other universities.

Health Physics. Health physics is the study of the principles and procedures of providing protection for individuals, the population, and the environment from the harmful effects of ionizing and nonionizing radiation.

Environmental Health Sciences. During the past two decades, public concern about the quality of the environment has increased, resulting in several major environmental policy decisions and the creation of government agencies to administer and monitor these policies. The purpose of the environmental health science program is to develop individuals who have the education and training required to deal with the complex environmental problems and issues of today and tomorrow.

General Health Sciences. The most outstanding feature of the general health sciences curriculum is its interdisciplinary nature. Its flexibility allows students to prepare for many kinds of careers related to human health. Students also may choose the general health sciences as preparation for entry into graduate programs in areas such as public health and health care management.

General Plan of Study: Prepharmacy

FRESHMAN YEAR

First Semester

2	BIOL 121	Biology I: Diversity, Ecology, and Behavior
2	BIOL 122	Laboratory in Biology I
4	CHM 115	General Chemistry
3	ENGL 101	English Composition I
3	MA 223+	Introductory Analysis I
<u>3</u>	ECON 210	Principles of Economics
17		

Second Semester

3	BIOL 131	Biology II: Development, Structure, & Function of Organisms
2	BIOL 132	Laboratory in Biology II
4	CHM 116	General Chemistry
3	ENGL 102	English Composition II
3	MA 224+	Introductory Analysis II
<u>3</u>		Elective
18		

+ MA 161-162 may be substituted for MA 223-224. Students with insufficient preparation may take MA 153-154 and start a calculus sequence in the second or third semester. This does not interfere with their admission procedure.

SOPHOMORE YEAR

Third Semester

4	BIOL 213	Human Anatomy & Physiology
3	CHM 255	Organic Chemistry
1	CHM 255 L	Laboratory in Organic Chemistry
4	PHYS 220	General Physics I
3	BIOL 322	Microbiology and
2	BIOL 323	Microbiology Laboratory or
<u>4</u>	BIOL 221	Introduction to Microbiology
16-17		

Fourth Semester

4	BIOL 214	Human Anatomy & Physiology
3	CHM 256	Organic Chemistry
1	CHM 256L	Laboratory in Organic Chemistry
<u>6</u>		Electives
14		

MEDICAL TECHNOLOGY

See the first three years of Purdue University North Central s Bachelor of Science degree in biology; medical technology majors must take BIOL 213/214 and OLS 274.

The medical technology curriculum is structured so that a student can study for three years at Purdue University and one year at an affiliated school of medical technology. Known as the three-plus-one program, this plan of study allows the student to complete, by the end of the junior year, all of the coursework required for admission to a hospital-based training program during the senior year.

Hospitals are very selective. The student must maintain an above-average grade point in order to be selected by a hospital program. In particular, emphasis will be placed on performance in biology and chemistry courses. A minimum of 90-95 credits must be completed by the end of the junior year to qualify for clinical studies.

Sometime during the sophomore year at Purdue University North Central, the student should plan to meet with the coordinator at Purdue s medical technology program on the West Lafayette campus. The coordinator will assist in scheduling junior classes at the main campus and also provide information about the clinical studies offered through affiliated hospital laboratories.

GENERAL HEALTH PHYSICS, GENERAL HEALTH SCIENCES, OCCUPATIONAL SAFETY AND HEALTH (Industrial Hygiene)

The first four semesters of these majors are available at Purdue North Central. Health Science majors must take BIOL 213/214 and OLS 331. *Students not interested in the Associate of Science may take CHM 111/112 instead of CHM 115/116.*

Because of growing public awareness of the need for environmental pollution control and worker protection, increasing attention is being focused on these problems at all levels of society. The occupational safety and health areas are concerned with the study, management, and control of natural and man-made factors in the general environment and in the work place and their relationship to human health and well-being.

The occupational safety and health area requires a well-coordinated interdisciplinary approach. Thus, the curriculum relies heavily on the biological, chemical, physical, mathematical, engineering, and health sciences. Graduates will be capable of identifying, analyzing, and promoting control of health and safety hazards in the general and occupational environments; recommending procedures for controlling health hazards using scientific and engineering principles in power systems, ventilation, noise control, and materials and chemical handling; serving and interacting with the governmental regulatory bodies; and promoting human health in the work and community environments.

COOPERATIVE PROGRAMS IN HEALTH SCIENCES

The following programs are offered by Purdue University North Central in cooperation with Indiana University Northwest:

ASSOCIATE DEGREE

Health Information Management	Medical Laboratory Technology
Dental Hygiene	Radiation Therapy
Health Information Technology	Radiologic Technology

For more information, contact Purdue North Central's Biology/Chemistry Department and the School of Allied Health Sciences, Indiana University Northwest.

LIBERAL ARTS PROGRAMS

Purdue University North Central offers a Bachelor of Arts degree in English, a Bachelor of Liberal Studies, a Bachelor of Arts in Behavioral Sciences and at least 60 credits toward a bachelor s degree in most programs offered in the School of Liberal Arts. By transferring to one of the other campuses of the University, or another college or university, the student can complete the work leading to the Bachelor of Arts or the Bachelor of Science degree with a variety of major options. See also the descriptions of the Bachelor of Liberal Studies in another section of this bulletin.

Attainment of the objectives of the School of Liberal Arts is accomplished in two ways: through the specialized knowledge acquired by taking major or minor programs in one or more of the subjects offered by the departments of the school, and through the opportunity to gain skill and knowledge in other areas of learning through a combination of requirements and free electives.

Students interested in completing the bachelor s degree in liberal arts should obtain a bulletin describing these programs on the campus of intended upper division registration. For the programs available in West Lafayette, as well as information on prerequisite courses needed and major-specific requirements, contact the School of Liberal Arts, Purdue University, West Lafayette.

Students can take courses that fulfill most of the Liberal Arts West Lafayette general education requirements, as well as the requirements for some majors, while attending Purdue University North Central. The column at left indicates the number of credits needed to complete a major, minor or concentration.

Departments and Programs in Liberal Arts
AUDIOLOGY & SPEECH SCIENCES

- 31 Audiology and Speech Sciences Major
- 43 Speech-Language-Hearing Pre-Professional Concentration
- 43 Speech-Language-Hearing Science Concentration

COMMUNICATION

- 45 Concentration in Advertising
- 45 Concentration in Interpersonal Communication
- 45 Concentration in Journalistic Communication
- 45 Concentration in Mass Communication
- 45 Concentration in Organizational Communication
- 45 Concentration in Public Communication
- 45 Concentration in Public Relations
- 44 Concentration in Telecommunication
- 15 Communication Minor
- 24 General Communication Major
- 12 Pre-Communication

ENGLISH

45	Comparative Literature Area
33	Creative Writing Major
12	Creative Writing Minor
30	English Major
12	English Minor
33	Professional Writing Major

FOREIGN LANGUAGES AND LITERATURES

44	French Concentration
35	French Major
15	French Minor
44	German Concentration
35	German Major
15	German Minor
15	Italian Minor
15	Japanese Minor
44	Russian Concentration
35	Russian Major
15	Russian Minor
44	Spanish Concentration
35	Spanish Major
15	Spanish Minor

HISTORY

33	History Major
12	History Minor

HEALTH, KINESIOLOGY, AND LEISURE STUDIES

42	Bachelor of Physical Education Core Requirements
44-46	Athletic Training Concentration
35	Exercise and Fitness Major
45	Health Promotion Concentration
35	Health Promotion Major
12	Health Promotion Minor
30	Movement and Sports Sciences Major
45	Recreation Studies Concentration B.A. Degree
30	Recreation Studies Major
15	Recreation Studies Minor

INTERDISCIPLINARY

30	Afro American Studies Major
15	Afro American Studies Minor
15	Asian Studies Minor
15	Classical Studies Minor

45	Comparative Literature Area
32	Interdisciplinary Film Major
15	Jewish Studies Minor
33	Linguistics Major
15	Linguistics Minor
33	Medieval Studies Major
15	Medieval Studies Minor
24	Religious Studies Major
12	Religious Studies Minor
33	Science and Culture
12	Women s Studies Minor

PHILOSOPHY

30	Philosophy Major
12	Philosophy Minor

POLITICAL SCIENCE

33	Political Science Major
12	Political Science Minor

PSYCHOLOGY

33	Psychology Major
12	Psychology Minor

SOCIOLOGY AND ANTHROPOLOGY

30	Anthropology Major
9	Anthropology Minor
33	Law and Society Major
12	Law and Society Minor
39	Sociology-Anthropology Concentration
33	Sociology Major
15	Sociology Minor

THEATRE

45	Theater Area
44	Theatre Concentration-Acting Option
45	Theatre Concentration-Stage Management Option
45	Theatre Concentration-Theatre Design and Technology Option
34	Theatre Major
14	Theatre Minor

VISUAL AND PERFORMING ARTS

15	Art and Design Minor
33	Art History Major
15	Art History Minor

15	Dance Minor
45	Fine Arts Concentration
45	Industrial Design Concentration
60	Interior Design Professional Program
15	Music History and Literature Minor
15	Music Theory Minor
42	Photography Major
15	Photography Minor
42	Photography Concentration
43-44	Visual Communications Design Concentration

On the following page is a sample study plan for the first four semesters will satisfy most of the preceding major areas in liberal arts and social sciences.

General Plan of Study: Liberal Arts
FRESHMAN YEAR

First Semester

3	ENGL 101	English Composition I
3	FL 101	Foreign Language
3	COM 114	Fundamentals of Speech Communication
3	MA 152	College Algebra for Liberal Arts or
	MA 153	Algebra and Trigonometry I
3	HIST 151	American History to 1877 or
—	POL 101	American Government and Politics
15		

Second Semester

3	ENGL 102	English Composition II
3	FL 102	Foreign Language
3	SOC 100	Introductory Sociology
3	STAT 113	Probability and Statistics
3	PHIL 110	Introduction to Philosophy or
—	HIST 104	Introduction to the Modern World
15		

SOPHOMORE YEAR

Third Semester

3	ASTR 263	Descriptive Astronomy: The Solar System or
	BIOL 121/122	Biology I: Diversity, Ecology, and Behavior
3	PSY 120	Elementary Psychology
3	A&D 255	Art Appreciation or
	MUS 250	Music Appreciation
3	FL 201	Foreign Language
3	PHIL 111	Ethics or
—	SOC 220	Social Problems
15		

Fourth Semester

3	GEOS 120	Introduction to Geography or
	F&N 303	Essentials of Nutrition
3	FL 202	Foreign Language
3	Gender Issues	(PSY 239, IDIS 280, ENGL 360, or PHIL 225)
	Course	
3		Major Requirement or Elective
<u>3</u>		Major Requirement or Elective
15		

MANAGEMENT PROGRAMS

The Krannert School of Management at Purdue University's West Lafayette campus offers Bachelor of Science degrees in Industrial Management, Management and Accounting. The Bachelor of Science in economics is offered jointly by the Krannert School of Management and the School of Liberal Arts.

INDUSTRIAL MANAGEMENT

The Bachelor of Science program in Industrial Management is designed for students who wish to pursue careers in the technical areas of business, such as industrial sales in industries with a strong relationship between management and computer and engineering disciplines.

MANAGEMENT

The management program is designed for students who wish to pursue careers in non-technical areas of the business world. Its aim is to develop a broad perspective of the business organization and the economic environment in which it operates.

ACCOUNTING

The accounting program prepares students for several career paths, including cost accountant, budget officer, tax accountant and certified public accountant (CPA).

ECONOMICS

The Bachelor of Science in Economics is offered jointly by the Krannert School of Management and the School of Liberal Arts, and includes study of microeconomics, macroeconomics, mathematics, statistics and humanities.

Regional Campus Transfers to Krannert School of Management, Pre-Management Division

Students may begin their coursework at Purdue North Central campus, and when ready, apply for a regional campus transfer to Krannert School of Management at the West Lafayette campus. At PNC, students can receive the necessary preparation for admission into Krannert's Pre-Management Division. A student can apply for a regional transfer to Krannert School of Management from Purdue North Central when either of the following conditions are met:

- (1) if the student requested *at time of the filing of the application for admission* consideration under Krannert's School of Management subject matter requirements, and meets these requirements, and successfully completes a minimum of 15 credit hours with a C or better in all completed Management Admissions Index * courses; or
- (2) if the student does not meet the subject matter requirements at the time of admission, or fails to notify Purdue North Central of his or her intention to transfer to Krannert School of Management, but has nevertheless com-

pleted all of the coursework that Krannert requires in order to complete a **change of degree objective (CODO)**** into one of Krannert's programs. Krannert requires a minimum of 15 completed hours with a C or better in all completed MAI* courses, plus if MGMT 201 and ECON 252 are taken, a C or better is required, plus MA 223 (differential calculus of one variable) must be completed with a C or better (MA 161 for Industrial Management majors) before a change of degree objective can be granted.

***MANAGEMENT ADMISSIONS INDEX COURSES**

The Management Admissions Index (MAI) is the average of grades earned in certain specified courses as noted below, and is subject to change without notice.

Industrial Management Management Admissions Index (MAI) Courses

MA 161, 162	ECON 251+
MGMT 200+	ENGL101 and 102 or 103
CS 235+	COM 114

Minimum of C or higher in all courses taken, with an average exceeding 2.4 for IM.

Management or Accounting Management Admissions Index (MAI) Courses

MA 151 (or MA 153 and 154)	CS 235+
MA 223	ECON 251+
MA 224	ENGL 101 and 102, or 103
MGMT 200+	COM 114

Minimum of C or higher in all courses, taken, with an average exceeding 2.5 for M.

Economics

The Economics program, which is jointly sponsored by the School of Liberal Arts and the Krannert School of Management, does not have a Management Admissions Index; however, MA 151 (or MA 153 and 154), ENGL 101, ENGL 102, MA 223, MA 224, ECON 251, ECON 252 plus a year of Foreign Language are strongly suggested.

Please see your advisor in order to determine which other Purdue North Central courses may be applied towards your transfer to Krannert School of Management. These courses include, but are not limited to a world history course, science courses, literature courses and the like.

+ Must be taken at Purdue University
** Change of degree objectives (CODO) requirements are subject to change. For a list of CODO requirements, see your advisor or visit: www.purdue.edu/vpss/vpss/codo.html

Advancement to Management Division.

Regional campus transfer students, like all underclassmen admitted to Krannert, are classified as Pre-Management, and must be accepted into Krannert's Management Division in order to take many upper level courses and to complete all requirements of the Management Division for a baccalaureate degree. It is important to understand that while the Purdue North Central Business curriculum and the Krannert Management curriculum have many similarities, guaranteed transferability of all courses is not possible. Students pursuing the management, accounting and industrial management programs are guaranteed admission to the Management Division if they complete all course requirements specified in the first two semesters of the chosen plan of study with a management admissions index (MAI) of at least 2.75 for management and accounting and 2.60 for industrial management. The MAI is the average of grades earned in certain specified courses. The MAI courses are subject to change. Students pursuing a degree in economics are required to have a graduation index of 2.75 in order to advance to the Management Division. All students must consult closely with their academic advisors regarding their academic performance and progress.

SCIENCES

COMPUTER SCIENCES

The Department of Computer Sciences at West Lafayette offers a Bachelor of Science program. Students may take many electives and other required freshman/sophomore courses at the North Central campus. An associate degree program in computer technology is also available on the campus, as described earlier in this catalog.

EARTH AND ATMOSPHERIC SCIENCES

Earth and atmospheric sciences focus on the study of the atmosphere, oceans, and the solid earth. These disciplines are concerned with the quality of life and the physical environment in which we live. Earth and atmospheric scientists have accepted the challenge of arriving at solutions to basic and applied problems that affect our planet. The Department of Earth and Atmospheric Sciences at West Lafayette offers four programs leading to the Bachelor of Science degree:

- | | |
|---------------------|--------------------------|
| Solid Earth Science | Earth Science Teaching |
| Atmospheric Science | Environmental Geoscience |

Students may take many electives and other required freshman/sophomore courses at the North Central campus. However, none of the required Earth and Atmospheric Sciences courses are offered.

SCHOOL OF TECHNOLOGY GRADUATE PROGRAM

Building on a tradition of excellence in graduate education at Purdue University, the School of Technology offers graduate instruction leading to the Master of Science degree. Graduate studies are offered in Aviation Technology, Building Construction Management, Computer Graphics, Computer Information Systems, Electrical Engineering Technology, Industrial Technology, Mechanical Engineering Technology, and Organization Leadership and Supervision. The non-thesis directed project master's degree program provides an opportunity for individualized professional development studies in technology, engineering technology, and technology education.

The goal of the program is to provide an educational experience, which will appropriately prepare an individual for leadership positions in industry and education. The Doctor of Philosophy and the thesis Master of Science degree programs are administered jointly with the School of Education and provide educational opportunities in adult education, instructional development, curriculum design, and education administration, with a major concentration in technology or technology education.

The School of Technology also delivers a weekend program for graduate education that provides individuals with the opportunity to complete the Master of Science degree in Technology within five academic semesters. The program has been developed such that students make a two-year commitment in registering with the program's specified course offering, thus maintaining proper sequence of experiences.

Graduate students are offered the opportunity to work and study with the School of Technology faculty members who have national and international reputations in technical and manufacturing disciplines, as well as areas of human resources. Those interested in specific information about the graduate program may contact the Graduate Office, School of Technology, Kroy Hall, in West Lafayette. Further information and an on-line application are available at www.tech.purdue.edu/graduate.

ENGINEERING PROGRAMS

Freshman engineering is available at the Purdue University North Central campus. This basic core of courses common to the various professional engineering programs can lead to study in: aeronautics and astronautics, agricultural engineering, chemical engineering, civil engineering, construction engineering, management engineering, computer engineering, electrical engineering, engineering sciences, industrial engineering, land surveying engineering, mechanical engineering, materials science, metallurgical engineering, nuclear engineering, and interdisciplinary engineering on the West Lafayette campus.

FRESHMAN ENGINEERING

This program of study leads to admission in one of the Schools of Engineering. The freshman program of study in which an individual student is placed is determined by the College Entrance Examination Board tests and school record data.

Freshman Engineering can be completed in one year. There are alternate programs of study available — some for the very well prepared, some for those less well prepared. Certain students have essentially completed their freshman requirements by their high school work, while others may require more than two semesters to prepare themselves for the professional engineering schools.

Each beginning engineering student is advised individually by an advisor to ensure that the student is properly placed in a program where there is a high probability of success. Prospective beginning engineering students are encouraged to visit the advisor at Purdue University North Central as early as practicable in their junior or senior year in high school.

Students successfully completing this program may transfer to the West Lafayette campus and pursue the engineering major of their choice (if qualified).

General Plan of Study: Engineering Transfer

For those students fully qualified upon entrance

FRESHMAN YEAR

First Semester

5	MA 161	Plane Analytic Geometry and Calculus I
4	CHM 115	General Chemistry
3	ENGL 101	English Composition I
3	ENGR 195E	C++ Language Programming for Engineering and Technical Applications
<u>1</u>	ENGR 100	Freshman Engineering
16		

Second Semester

5	MA 162	Plane Analytic Geometry and Calculus II
4	CHM 116	General Chemistry
4	PHYS 152	Mechanics
3	COM 114	Fundamentals of Speech Communication
<u>3</u>	CGT 110	Technical Graphics Communication
19		

Students enrolled in freshman engineering may pursue some second-year engineering courses on the North Central campus contingent upon enrollment in the individual courses. These sophomore courses are transferable to West Lafayette engineering programs.

TECHNOLOGY PROGRAMS

The School of Technology at West Lafayette offers two undergraduate programs of study in technology — industrial technology and computer graphics technology — which are not approved degree programs at the North Central Campus. However, many of the courses required for the Associate of Science and Bachelor of Science degrees, as required at West Lafayette, are offered on a regular basis at the North Central campus. Courses for both programs are presented for students who wish to begin their academic career at Purdue University North Central and then transfer to the West Lafayette campus.

Prospective students for the industrial technology program should give serious consideration to enrolling in the industrial engineering technology (IET) program which is available at Purdue University North Central. An Associate of Science IET degree (ABET accredited) and a Bachelor of Science degree in organizational leadership and supervision degree with an industrial emphasis also is available. Graduates with these majors have been extremely successful in job placement and career advancement.

Further information may be obtained by contacting the Technology/Engineering Department.

INDUSTRIAL TECHNOLOGY

West Lafayette's Department of Industrial Technology offers Associate of Science, Bachelor of Science, and Master of Science programs of study. All have a technological base and are designed to prepare graduates for entrance into a wide range of positions. The Associate of Science in trade and technical teaching is a field-based, external degree program that provides in-service teacher education to people already employed as teachers of trade and technical subjects. Students pursuing a bachelor's degree may elect to major in industrial technology, industrial technology education, or vocational industrial teaching. Each student's program will be based on the major the student has selected and will be tailored through electives to meet individual needs.

INDUSTRIAL TECHNOLOGY AND INDUSTRIAL DISTRIBUTION OPTION

The Purdue University North Central Technology/Engineering Section offers a four-semester plan of study that will transfer to West Lafayette and apply towards associate or bachelor's degrees in industrial technology.

The industrial technology bachelor's degree option is an interdisciplinary program designed to prepare a broadly educated generalist in industry and technology, rather than a specialist in a specific technology. Students may, however, develop areas of concentration of their own design through the choices of electives. In addition to a multifaceted technical education, all graduates are required to have a solid general education background in the humanities, social and behavioral sciences, and the life and physical sciences.

The industrial distribution option is designed for students seeking a career in wholesale, retail, or industrial distribution. Students pursuing this option will continue their studies in accounting, technical sales, warehouse management, inventory control and financial transactions in distribution.

General Plan of Study: Industrial Technology and Industrial Distribution Option

FRESHMAN YEAR

First Semester

3	CPT 107	Computer Literacy
3	IET 104	Industrial Organization
3	MET 141	Materials and Processes I
3	ENGL 101	English Composition I
<u>3</u>	MA 153	Algebra and Trigonometry I
15		

Second Semester

3	CGT 110	Computer Graphics Communications
3	ECON 210	Principles of Economics
3	COM 114	Fundamentals of Speech Communication
3	ENGL 102	English Composition II
<u>3</u>	MA 154	Algebra and Trigonometry II
15		

SOPHOMORE YEAR

Third Semester

3	CGT 290	Computer-Aided Drafting and Design
3	EET 214	Electricity Fundamentals
3	MET 242	Manufacturing Processes II
3	OLS 252	Human Behavior in Organizations
<u>3</u>	MA 223	Introductory Analysis I
15		

Fourth Semester

3	CPT 175E	Visual Programming
3	IET 204	Techniques of Maintaining Quality
3	MET 230	Fluid Power
3	OLS 331	Occupational Safety and Health
<u>4</u>	PHYS 220	General Physics I
16		

**BACHELOR OF SCIENCE DEGREE
IN TECHNOLOGY EDUCATION**

TECHNOLOGY EDUCATION OPTION

The Purdue University North Central Technology/Engineering Department offers a two-semester plan of study that will transfer to West Lafayette and apply towards a Bachelor of Science degree in technology education. Students study a broad core program of general education subjects essential for all teachers. They develop technical competencies that will enable them to present effective instruction covering a broad range of industrial tools, materials and processes. They also complete a sequence of professional education courses, including student teaching. Technology education at Purdue University also offers the individual student an opportunity to acquire a degree of specialization in one or more of the technical subject areas.

**General Plan of Study: Technology Education Option
FRESHMAN YEAR**

First Semester

3	CGT 110	Computer Graphics Communications
3	CPT 107	Computer Literacy
3	ENGL 101	English Composition I
3	MA 153	Algebra and Trigonometry I
<u>3</u>	BIOL 121	Biology I: Diversity, Ecology and Behavior
15		

Second Semester

3	CGT 290	Computer-Aided Drafting and Design
3	IET 104	Industrial Organization
3	COM 114	Fundamentals of Speech Communication
3	ENGL 102	English Composition II
<u>3</u>	MA 154	Algebra and Trigonometry II
15		

GRADUATE STUDY IN INDUSTRIAL TECHNOLOGY

The Department of Industrial Technology at West Lafayette provides instruction leading to the Master of Science degree. Special programs of graduate study may be designed for people who do not have an advanced degree objective but are concerned about improving their professional qualifications or meeting advanced certification requirements. Programs are currently available that meet the certification requirements for industrial cooperative training coordinators and for supervisors of trade and industrial education.

Admission to the Graduate School may be granted to graduates of Purdue University or of any other accredited institution. People accepted to do advanced study in industrial technology must present adequate undergraduate preparation and experience to make graduate study a profitable undertaking.

Those interested in specific information about advance work in industrial technology may contact the Department of Industrial Technology, School of Technology, Knoy Hall, or the Dean of the Graduate School, Young Graduate House, both in West Lafayette.

COMPUTER GRAPHICS TECHNOLOGY

The Purdue University North Central Technology/Engineering Department offers a two-semester plan of study that will transfer to West Lafayette and apply towards the associate and/or bachelor's degree in Computer Graphics Technology in the School of Technology. Graphics is an important form of communication for scientists, engineers, technologists, and technicians. Each technical profession uses graphics in specific ways to explore its technology, to design solutions to technical problems, to document its products and services and to conduct marketing worldwide.

The Associate of Science program is designed to prepare students for employment as graphics technicians. Graduates may prepare detail, working, or pictorial drawings; summarize data in charts and graphs; complete diagrams and schematics designed by an engineer and apply standard graphic practices to technical documentation. A graphics technician can expect employment in manufacturing, service and information industries as a draftsman, illustrator and/or technical artist.

At the end of the associate degree program, students have the option of joining the work force or applying for admission to the Bachelor of Science degree program. Graduates of this program may produce technical graphics as technicians; plan and supervise technical publications; evaluate graphics equipment requirements and plan for purchase and installation; operate sophisticated computer-aided graphics, plotting, typesetting, or reprographic equipment; and supervise the training and retraining of graphics technicians.

A graphics technologist can expect to work in graphic services departments of major corporations where engineering documentation is produced, as a sales representative for graphic equipment manufacturers, as a technical graphics practitioner or consultant, as a coordinator of a technical services department in industry, and in government or education.

General Plan of Study: Computer Graphics Technology
ACCEPTABLE COURSES

3	COM 114	Fundamentals of Speech Communication
3	ENGL 101	English Composition I
3	MA 153	Algebra and Trigonometry I
3	SOC 100	Introductory Sociology
3	CPT 175E	Visual Programming
3	COM 415	Discussion of Technical Problems or
	COM 320	Small Group Discussion
3	ECON 210	Principles of Economics
3	ENGL 420	Business Writing
3	MA 154	Algebra and Trigonometry II
3	MA 223	Introductory Analysis I
3	PSY 120	Elementary Psychology
3	PHYS 220	General Physics I
3	PHYS 221	General Physics II

DEVELOPMENTAL STUDIES

The Developmental Studies section of Purdue University North Central provides access to higher education for area residents whose previous academic preparation precludes admission to one of the degree curricula. To this end, the Developmental Studies department offers courses through the Bridge program and provides academic services through the Learning Center that are designed to enhance students' academic abilities. In addition, the Developmental Studies department provides a place where students not yet committed to a specific program of study can sample and examine various offerings and receive academic advice regarding future educational goals. Finally, the department designs courses, programs, and curricula to meet immediate and future community needs in cooperation with governmental and private agencies.

BRIDGE PROGRAM

The Bridge Program is a restricted academic program designed so students with a less than satisfactory academic background may begin working towards their academic goals at Purdue University North Central. Students are admitted to this program by Enrollment Services after a complete evaluation of previous academic work – high school transcripts, test scores, class rank, GED scores, etc. There are restrictions on what students in the Bridge program may and may not do academically.

Students in the Bridge Program . . .

- *must* fulfill their Bridge requirements in their first two semesters of enrollment;
- *must* receive their academic advice from a designated Bridge advisor;
- *must* attend a Bridge Program Orientation session at the beginning of their first semester of enrollment;
- *must* enroll in Freshman level courses ONLY;
- *must* carry no more than twelve credit hours in a semester;
- *may not* receive a degree or certificate.

Students who do not meet these requirements may be academically encumbered by the Department Chair for Developmental Studies.

To complete the Bridge requirements students must . . .

- enroll in and earn a passing grade in their first algebra course;
- earn an overall GPA of 2.00.

Bridge students also are strongly advised to . . .

- enroll in and earn a passing grade in their first English Composition course;
- enroll in and earn a passing grade in GNC College Success;
- complete any other required developmental course work.

As soon as these requirements are met, a student may move into a pre-curriculum. A student works with an academic advisor in the major area and is less restricted in course selection.

Developmental courses offered on this campus are the following six courses. Course descriptions are found in the back of this catalog. These classes do NOT count towards graduation in any Purdue program.

GNC 064	Fundamentals of Algebra
GNC 065	Plane Geometry
GNC 071	Reading Enhancement

These classes may count as electives in the Liberal Arts Division They do not count for graduation in any other major.

GNC 100	College Success
ENGL 100	English Composition
MA 111	Algebra

GENERAL ADMISSION REQUIREMENTS

Purdue University North Central requires that applicants entering Developmental Studies have a high school diploma or G.E.D. Students should demonstrate the potential ability to do well in college-level courses.

All new students are required to take the Student Assessment and Measurement (SAM) tests prior to registration.

The University encourages each student to apply for her or his desired degree program rather than the Bridge program. Members of the Enrollment Services are trained to assess a student s transcript. They will assign students to the Bridge program when necessary.

DESCRIPTION OF COURSES

Key to Use

The courses listed in the following pages will, for the most part, be offered during the academic years covered by this catalog. In most cases, the session in which a course will be offered is indicated as follows:

- Sem. 1, 2, or 3 (summer session). These courses are offered every year and every semester.
- Sem. 1E., Sem.1O., Sem. 2E., Sem. 2O.
- Sem. 1E. indicates that the course is offered in the first semester of even numbered calendar years. Sem. 2O indicates that the course is offered in the second semester of odd numbered calendar years.

In some cases, it is impossible to specify the sessions in which a course will be offered. These courses have been marked OC which indicates that the course is offered only occasionally. Information on the scheduling of courses marked OC can be obtained from the chairperson of the section which administers the course.

Description of course content is preceded by information to be interpreted as follows: first, the official number of the course; second, the course title; third, the semester(s) in which it is offered; fourth, the number of hours a week of recitation, laboratory, or practice, and credit hours; and fifth, the prerequisites required. Under Physics, for example, the following:

PHYS 220 **General Physics**
Sem. 1, class 3, lab. 2, cr. 4. Prerequisites: MA 153, 154 or equivalent.

Indicates that the course, PHYS 220, in General Physics, is offered during the fall semester for three recitation and two laboratory hours a week, and gives four credits. It also states that MA 153, MA 154 or an equivalent course must be taken prior to PHYS 220.

The course numbers indicate the following:

- 001-099** Pre-college and development courses
- 100-299** Lower-division courses normally scheduled for freshmen and sophomores
- 300-499** Upper-division courses normally scheduled for juniors and seniors
- 500-599** Dual-level courses that may be scheduled by juniors and seniors, and by graduate students for graduate credit

Descriptions of graduate-level courses (**600 series**) not listed in this bulletin, can be found in The Graduate School bulletin. In certain cases, an undergraduate student may take a 600-level course.

When a course number immediately follows a course title, that number designates an equivalent course offered by another department.

ACCOUNTING

(See Business)

ARCHITECTURAL TECHNOLOGY

ART 150 Architectural Construction I

Sem. 1 or 2, lab. 6, cr. 3 with outside assignments required. Prerequisite: CGT 110, Corequisite: CGT 290 and MA 153.

A study of wood frame construction through a semester project requiring planning and working drawings. Field trips may be included.

ART 221 Architectural Presentation

Sem. 2, lab. 6, cr. 2. Prerequisite: CGT 110 and CGT 290.

Introduction to techniques of presentation drawings and models of buildings. Exercises in freehand sketching, perspective drawing, shades and shadows, and use of color in renderings. Survey of the application of color in buildings, construction, and purpose of various types of architectural models.

ART 222 Architectural Construction II

Sem. 2, lab. 6, cr. 3. Prerequisite: ART 150 and CGT 290.

Preparation of preliminary and working drawings for an intermediate-size commercial or institutional building.

ART 299 Architectural Technology

Sem 1, 2 and 3, cr. 1-4.

Hours and subject matter to be arranged with staff. Course may be repeated for up to nine hours of credit.

ART 299P Plans & Specifications

Sem. 1, class 2, lab. 3, cr. 3. Prerequisite: MA 111.

Reading and interpretation of contract documents for construction. Emphasis on plans and specifications for a variety of structures.

ART AND DESIGN

A&D 113 Basic Drawing

Sem. 1 and 2, class 1, studio 5, cr. 3.

An introduction to drawing and sketching as a means of communication of ideas.

A&D 201 Art for Elementary School Teachers

Sem. 1 and 2, class 3, studio 3, cr. 3.

Prerequisite: Admission to the Teacher Education Program.

Art theory and experiences, curriculum theory, and materials preparatory for instruction of elementary school children.

A&D 255 Art Appreciation

Sem. 1 and 2, class 2, cr. 3. Not open to freshmen.

Understanding and appreciation of the problems overcome by mankind in the origins and growth of art.

ASTRONOMY

ASTR 263 Descriptive Astronomy: The Solar System

Sem. 1 and 3, class 2, lab 2, cr. 3. Not available to students with credit in ASTR 363. Prerequisite: GNC 064 or equivalent.

A descriptive non-mathematical course in astronomy intended for non-physics majors. Topics include: description of the sky; historical development of astronomy, motion of the sun and the moon; solar and lunar eclipses; the seasons and the calendar; the sun and the planetary system; comets, meteoroids, and asteroids. Includes required observing sessions.

ASTR 264 Descriptive Astronomy: Stars & Galaxies

Sem. 1 and 3, class 2, lab 2, cr. 3. Not available to students with credit in ASTR 364. Prerequisite: GNC 064 or equivalent.

A descriptive non-mathematical course in astronomy intended for non-physics majors. Topics include: properties of stars; stellar birth and death; the Hertzsprung-Russell diagram; main sequence stars; binary systems; stellar clusters; red giants and white dwarfs, nova and supernova; neutron stars and black holes; galaxies, the big bang and the cosmological red shift. Includes required observing sessions.

BIOCHEMISTRY

BCHM 561 General Biochemistry I

Sem. 1, class 3, cr. 2. Prerequisite: CHM 256 or CHM 262 or equivalent, or consent of instructor.

Protein structure and function, properties of enzymes in aqueous solution, mechanisms of enzyme action, basic concepts of metabolism, sugar and fatty acid metabolism, introduction to biological membranes.

BCHM 562 General Biochemistry II

Sem. 2, class 3, cr. 3. Prerequisite: BCHM 561 or equivalent.

Amino acid metabolism, photosynthesis, biosynthesis of membrane lipids and steroids, biosynthesis of nucleotides, structure and function of nucleic acids, protein synthesis, and control of gene expression.

BIOLOGICAL SCIENCES

BIOL 114 Freshman Experience Seminar (Biology Majors)

Sem. 1, class 1, cr. 1.

Required of all incoming Biology Majors. This course exposes majors to the resources and possibilities in Biology while explaining expectations for students and means of succeeding in science.

BIOL 121 Biology I: Diversity, Ecology & Behavior

Sem. 1, class 2, cr. 2. Corequisites: MA 153 or higher, CHM 111 or higher, BIOL 122.

Assumed Ability: Strong background in high school science, especially biology and chemistry with a C or better, and mathematics. Creates a framework for ordering biology by examining the unity and diversity of life on earth with an emphasis on ecology, genetics, population biology, evolution and behavior.

BIOL 122 Laboratory in Biology I: Diversity, Ecology & Behavior

Sem. 1, lab. 4, cr. 2. Corequisites: MA 153 or higher, CHM 111 or higher, BIOL 122.

Laboratory exercises focusing on the diversity of organisms on earth, the evolutionary mechanisms by which they arose; their ecology, behavior, and genetics.

BIOL 131 Biology II: Development, Structure & Function of Organisms

Sem. 2, class 3, cr. 3. Prerequisites: BIOL 121/122; Corequisites: MA 153 or higher, CHM 111 or higher, BIOL 122.

Principles of development of plants and animals and the relationship between the structure and function of selected systems of these organisms.

BIOL 132 Laboratory in Biology II: Development, Structure & Function of Organisms

Sem. 2, lab 4, cr.2. Corequisites: MA 153 or higher, CHM 111 or higher, BIOL 122.

Descriptive and experimental aspects of early plant and animal development, gross anatomy, histology, and physiology of selected plant and animal systems.

BIOL 205 Biology for Elementary School Teachers

Sem. 1, class 2, lab. 2, cr. 3. Prerequisites: 1 year high school biology and/or chemistry or equivalent. Does not satisfy requirements for School of Science majors.

Unifying concepts of biology taught with materials appropriate for future elementary school teachers.

BIOL 206 Biology for Elementary School Teachers

Sem. 2, class 2, lab. 2, cr. 3. Prerequisite: BIOL 205. Does not satisfy requirements for School of Science majors.

Continuation of BIOL 205.

BIOL 211 The Social Impact of the Biological Sciences

Sem. 1, class 2, lab 2, cr. 3. Does not satisfy requirements for School of Science majors.

An introduction to basic concepts, experimentation, and information found within the biological sciences. Emphasis is placed upon the role of biology within the social framework. Relationships between this discipline and common social problems are explored, including those which deal with conservation ecology.

BIOL 212 The Social Impact of the Biological Sciences

Sem. 2, class 2, lab 2. cr. 3. Does not satisfy requirements for School of Science majors.

A continuation of BIOL 211. (It is useful but not essential for this course to be preceded by BIOL 211).

BIOL 213 Human Anatomy & Physiology

Sem. 1, class 3, lab. 2, cr. 4. Prerequisite: CHM 103 or 1 year HS Chemistry.

An introduction to human anatomy and physiology. Topics include the basic structural and functional organization of the human body, cellular anatomy and physiology, body tissues, the integument, and the skeletal, muscular and nervous systems. Lecture material is reinforced and expanded upon during laboratory studies of gross anatomy, histology and physiology.

BIOL 214 Human Anatomy & Physiology

Sem. 2, class 3, lab 2, cr. 4. Prerequisite/ Corequisite: CHM 119 either during BIOL 213 or BIOL 214.

A continuation of BIOL 213. Topics include: structure and function of the endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary and reproductive systems; basic hematology, fluid and electrolyte balance and acid-base balance. Lecture material is reinforced and expanded upon during laboratory studies of gross anatomy, histology, and physiology.

BIOL 221 Introduction to Microbiology

Sem. 1 and 2, class 3, lab. 2, cr. 4. Prerequisites: CHM 119 or equivalent, BIOL 213 or BIOL 121/122 or equivalent.

The isolation, growth, structure, function, heredity, identification, classification, and ecology of microorganisms; their role in nature and significance to man.

BIOL 223 Anatomy & Physiology Practicum I

Sem. 1, lab 2, cr. 1. Prerequisite: Transfer credit for BIOL 203.

This course is designed for students transferring to PNC with credit for BIOL 203. It will give the student the additional

anatomy and physiology background and the one additional credit hour required for BIOL 213 at the North Central Campus.

BIOL 224 Anatomy & Physiology Practicum II

Sem. 2, lab 2, cr. 1. Prerequisite: Transfer credit for BIOL 204.

This course is designed for students transferring to PNC with credit for BIOL 204. It will give the student the additional anatomy and physiology background and the one additional credit hour required for BIOL 214 at the North Central campus.

BIOL 231 Biology III: Cell Structure & Function

Sem. 1, class 3, cr. 3. Prerequisites: BIOL 131/132. Corequisites: CHM 255/255L, BIOL 122.

An introduction to modern cell biology through an examination of the physical and chemical properties that lead to an understanding of the molecular basis for cell function.

BIOL 232 Laboratory in Biology III: Cell Structure & Function

Sem. 1, lab. 4, cr. 2. Prerequisites: BIOL 131/132. Corequisites: CHM 255/255, BIOL 122.

Laboratory exercises designed to illustrate the properties, functions, and growth of prokaryotic and eukaryotic cells and to introduce the student to modern experimental methods used to study cells and their separated components.

BIOL 241 Biology IV: Genetics & Molecular Biology

Sem. 2, class 3, cr. 3. Prerequisites: BIOL 231/232. Corequisites: CHM 256/256, BIOL 122.

Elementary genetics emphasizing the classical genetic principles of segregation, linkage, chromosome abnormalities, gene action, immunogenetics, blood groups, and population genetics. Topics in molecular biology include DNA structure, replication, mutation, repair, transcription, translation, and regulation.

BIOL 242 Laboratory in Biology IV: Genetics & Molecular Biology

Sem. 2, lab. 4, cr. 2. Prerequisites: BIOL 231/232. Corequisites: CHM 256/256L, BIOL 241

Laboratory experiments in classical, molecular, and bacterial genetics will be offered. Exercises will be performed in the areas of human and population genetics.

BIOL 295 Special Assignments

Sem. 1, 2, and 3, cr. Variable. Prerequisite: completion of Freshman-Sophomore core, corequisites in Mathematics and Chemistry, and consent of instructor. May be repeated for credit.

Reading, discussions, written reports, or laboratory research work selected for enrichment in special areas of the biological sciences.

BIOL 322 Microbiology

Sem. 1 and 2, class 3, cr. 3. Prerequisites: CHM 111/112 or CHM 115/116 and BIOL 121/122, BIOL 131/132 or equivalent. Corequisite: BIO 323. This course is restricted to students majoring in the biological sciences or health sciences.

An examination of the microbial world—acellular and cellular. Classification, structure, function, growth, isolation, ecology, immunology, their role in nature, and their impact on human health.

BIOL 323 Laboratory in Microbiology

Sem. 1 and 2, lab. 4, cr. 2. Corequisite: BIOL 322.

An introduction to microbiological applications—identification, isolation, and growth of microorganisms, including modern methods for identifying pathogen microbes.

BIOL 324 Natural History of the Great Smoky Mountains

Great Smoky Mountain Institute, Tremont Tennessee, Summer (Mon. to Sat.) cr. 3. (one week of intensive lecture and field work). Prerequisite: Two semesters of Natural Science Courses at the University Level. Does not satisfy requirements for School of Science majors.

Learn about air quality, fire management practices, the reintroduction of native special and the elimination of exotic ones.

You'll have the opportunity to conduct a wildlife census, and assist park personnel with a resource management project such as reestablishing a native meadow or ridding a habitat of invasive plant species. Special courses on trees, salamanders, stream ecology, and geology round out the week. This week of in-depth study and first-hand field experience is perfect for classroom teachers, naturalists or anyone interested in learning more about the natural world. Pre-trip and post-trip sessions at Purdue University North Central are required.

BIOL 325 Natural History of Northwest Indiana

Summer, class 3, cr. 3. Two semesters of natural science courses recommended or consent of the instructor.

This course consisting of field trips and lectures will discuss many aspects of ecosystems of the region. Some of the topics to be covered include geological history, glaciations, human settlement and impact, the Dunes and other ecosystems, amphibians, reptiles, mammals, birds, insects, plants and conservation issues. This course fulfills the requirement for a non-lab science elective for non-science majors and is ideal for anyone interested in the ecology of Northwest Indiana.

BIOL 395 Special Assignments

Sem. 1, 2 and 3, cr. Variable. Prerequisites: completion of Freshman-Sophomore core, corequisites in Mathematics and Chemistry, and consent of instructor. May be repeated for credit. Reading, discussions, written reports, or laboratory (research) work provided for enrichment in special areas of the biological sciences.

BIOL 404 Gross Anatomy

Sem. 1, class 3, lab. 4, cr. 5. Prerequisite: Consent of instructor

An in-depth examination of human gross anatomy. Details and variations of human anatomy are revealed through closely supervised dissection.

BIOL 407 Senior Capstone Experience Seminar

Sem. 2, class 2, cr. 2. Required for all senior level biology majors.

This is a synthesis course which is designed to allow a student the opportunity to utilize all his/her biological knowledge and general education skills (represent views clearly and cogently, analyze, think critically, and formulate reasoned conclusions) to solve real world problems within the area of the biological sciences. This course is also used by the faculty to assess and improve the curricular components of the biology degree program.

BIOL 410 Human Physiology

Sem. 2O, class 3, lab. 2, cr. 4.

Prerequisites: completion of Freshman-Sophomore Core; Corequisites in Mathematics and Chemistry.

An introduction to the function and structure of human life preserving systems. Includes neural and hormonal control and maintenance of cardiovascular, respiratory, renal, metabolic, muscular, skeletal, digestive and reproductive systems. Emphasis is also placed on the role of specialized tissues in the support of life preserving systems.

BIOL 411 Laboratory in Molecular Biology

Sem. OC, lab. 6, cr. 3. Pre/corequisite: BIOL 415.

Introduction to molecular and biotechnological methods useful for the characterization of proteins and nucleic acids.

BIOL 415 Introduction to Molecular Biology

Sem. 2O, class 3, cr. 3. Prerequisites: BIOL 231, BIOL 241, CHM 255 or equivalent.

An introduction to modern molecular biology techniques.

BIOL 455 Animal Physiology

Sem. 2E, class 3, cr. 3. Prerequisites: BIOL 231 and CHM 256 or equivalent courses. Corequisite: BIOL 456.

Analysis of selected vertebrate and invertebrate physiological systems as an introduction to animal physiology. Neural and hormonal mechanisms of cellular communication and the roles played by

these mechanisms in the action of specialized tissues; systemic and comparative physiology of respiration circulation, muscle contraction, osmoregulation, and sensory transduction. Emphasis on relationships between system function and underlying cellular mechanisms.

BIOL 456 Laboratory in Animal Physiology

Sem. 2E, lab 2, cr. 1. Corequisite: BIOL 455.

Laboratory experiments illustrating function of major systems to accompany General and Comparative Physiology.

BIOL 466 Developmental Biology

Sem. 1 or 2, class 2, lab 4, cr. 3. Prerequisites: Biology core.

Principles of development (embryology) of both plants and animals.

BIOL 483 Environmental and Conservation Biology

Sem OC, class 2, lab. 3, cr. 3. Prerequisites: Biology core.

The application of ecological principles to environmental issues. This course introduces concepts of modeling, natural history, and experimentation in making environmental and conservation decisions and policies.

BIOL 495 Special Assignments

Sem. 1, 2 and 3, cr. Variable. Prerequisites: completion of Freshman-Sophomore core, corequisites in Mathematics and Chemistry, and consent of instructor. May be repeated for credit. Reading, discussions, written reports, or laboratory research work selected for enrichment in special areas of the biological sciences.

BIOL 499 Biology Honors Thesis Research

Sem. 1, 2, and 3. Seniors only. May be repeated twice for credit.

Research under the guidance of a scientist.

DUAL LEVEL**Undergraduate-Graduate Courses****BIOL 505 Invertebrate Biology**

Sem. OC, class 3, cr. 3.

Zoology, systematics, physiology, and structure of invertebrate animals.

BIOL 513 Advanced Human Anatomy

Sem. 1, class 2, lab. 6, cr. 4. Prerequisites: BIOL 404, BIOL 213/214 or Physiology 410 or equivalent, and consent of instructor.

Detailed human anatomy and medical and pathological correlations with structures uncovered through dissection.

BIOL 529 Bacterial Physiology

Sem. OC, class 3, cr. 3. Prerequisites: one semester of microbiology, one semester of biochemistry or consent of instructor.

A detailed consideration of the central metabolic routes, their roles in generation of energy and key intermediates, and the conversion of those intermediates to small molecule building blocks. Regulatory mechanisms will be stressed.

BIOL 531 Parasitology

Sem. 3O, class 2, lab. 4, cr. 4. Prerequisites: BIOL 131/132 or equivalent.

Arthropod, protozoan, and helminth parasites; their morphology, life histories, host-parasite relationships, and control.

BIOL 533 Medical Microbiology

Sem. 1, class 3, cr. 3. Prerequisite: BIOL 322 and 323 or 221. Corequisite: BIOL 534.

Host-parasite relationships. Immunology. Bacteria, viruses and other microbes associated with infectious diseases.

BIOL 534 Laboratory in Medical Microbiology

Sem. 1, lab. 4, cr. 2. Prerequisite or corequisite: BIOL 533.

Isolation, identification, and properties of microorganisms associated with infectious diseases.

BIOL 537 Immunobiology

Sem. 2E, class 3, cr. 3. Prerequisites: biology, chemistry core, one semester of microbiology and/or consent of instructor.

Readings and discussion in the structural, cellular, and genetic basis of the immune response.

BIOL 580 Evolution

Sem. 2, class 3, cr. 3. Prerequisites: BIOL 121-122, 241-242 or equivalent.

A study of evolution as a basic concept of the biological sciences; an examination of current methods of experimentation within the area, as well as evidences for, and possible mechanisms of, evolutionary change.

BIOL 585 Ecology

Sem. 3E, class 2, lab 2, cr. 3. Prerequisites: Biology core or consent of instructor; statistics and/or calculus desirable.

Ecological processes and dynamics of populations, communities, and ecosystems; physical, physiological, behavioral, and population genetic factors regulating population and community structure; case studies, field studies, and simulation models of life history attributes, competition, predation, parasitism and mutualism.

BIOL 592 The Evolution of Behavior

Sem. 2, class 3, cr. 3. Prerequisite: BIOL 121 or consent of instructor.

An investigation of behaviors as adaptations: Specializations of sensory and motor mechanisms involved in behavior; animal communication systems; behavioral ecology; sexual selection and mating systems; the evolution of cooperation and altruism; patterns of social behavior as solutions to ecological problems such as predator avoidance and resource exploitations. Examples will be broadly comparative, ranging from microorganisms to mammals.

BIOL 597 Sex and Evolution

Sem. 1, class 3, cr. 3. Prerequisite: BIOL 585 or consent of instructor.

Covers various theoretical and empirical aspects of sexual reproduction from an evolutionary perspective. Topics include: Why did sexual reproduction evolve? What different modes of reproduction exist? How is the sex of an individual determined in different organisms? What sex ratio should exist in different species? What is sexual selection, and how does it influence male and female characteristics in various species? How does sexual selection influence human social behavior?

BOTANY/PLANT PATHOLOGY

BTNY 210 Introduction to Plant Science

Sem 1O, class 3, lab. 2, cr. 4. Prerequisite: Completion of Biology core series.

An introduction to the major groups of the plant kingdom, their origins, classification, and economic significance. Anatomy, morphology, physiology, biochemistry genetics and ecology of pertinent groups will be covered in relation to plant science and agriculture.

BNTY 555 Aquatic Botany

Sem. 1 or 2, class 2, lab 3, cr. 3. Prerequisites: BIOL 121/122 and consent of instructor.

The study of algae and higher plants of the aquatic environment, with emphasis on identification, morphology, ecology, role as pollutants, physiology, and control.

BUILDING CONSTRUCTION MANAGEMENT

BCM 100 Introduction to Construction

Sem. 1, class 2, cr. 2. Prerequisite: MA 111.

A survey of the construction industry. Includes the overall construction process from initial concept through start-up of the complete facility, career opportunities in the construction industry, and an introduction to the materials and systems used in construction with an emphasis on vocabulary building.

BCM 112 Construction Surveying Fundamentals

Sem. OC, class 2, lab. 3, cr. 3. Prerequisite: MA 151 or MA 153 and MA 154 or equivalent.

Introduction to basic surveying operations. Development of surveying skills necessary to measure distances, angles, and elevations to required accuracies. Calculation of tape corrections, bearing, coordinates, traverses, and areas. Emphasis is on instrument use and notekeeping techniques.

BCM 195 Construction Observation

Sem. OC, lab. 2, cr. 1.

Directed observation and inspection of construction work in progress on or near campus. May be repeated twice.

BCM 212 Construction Layout

Sem. OC, class 1, lab. 6, cr. 3. Prerequisite:

BCM 112 or consent of instructor.

Application of surveying skills relevant to the field of construction. Projects include layout of buildings, route centerlines, indirect determination of elevation and distance, referencing, establishment of grade, topographic mapping, and earthwork computations. Instruments used will include transit, theodolite, automatic level, laser, and EDM.

BCM 230 Mechanical & Electrical Systems

Sem. 1, class 3, cr. 3. Prerequisite: ART 150

A survey of systems for the supply and drainage of water, the heating and cooling of buildings, and the electrical power and lighting for buildings.

BCM 235 Construction Materials & Systems

Sem. 2, class 3, cr. 3. Prerequisites: ART 299P and BCM 100. Corequisite: ART 150.

An advanced study of materials and structural systems used in buildings. The study of materials includes their properties, characteristics, design parameters and applications. A study of structures, superstructures, special structures and construction features.

BCM 270 Materials & Estimates

Sem. 1, class 2, lab 4, cr. 3 or class 3, cr. 3. Prerequisite: BCM 235, MA 154 and CGT 290.

A study of materials, components, manufactured products, connections, details, and assemblies related to estimating construction work. Practice in estimating quantities and listing of work items in standard quantity survey format.

BCM 300 Analysis of Construction Operations

Sem. OC, class 2, cr. 2. Prerequisite: Junior standing.

Analysis of construction operations observed during a minimum of 10 weeks of work. Prior department approval of the type of work required. A written and oral report with visual aids describing company operations, project's components and systems, job duties, and safety analysis must be presented during the following academic year to receive credit.

BCM 345 Scheduling

Sem. 2, class 2, lab. 2, cr. 3. Prerequisite: BCM 270 and CPT 107.

A study of the planning and control of construction projects. Time schedules for materials, labor, and equipment. Emphasis is on CPM scheduling.

BCM 350 Field Operations

Sem. OC, class 3, cr. 3. Prerequisite: Junior standing.

A study of selected field operations including both equipment-intensive and labor-intensive tasks. The selection and management of equipment are emphasized.

BCM 375 Estimating II

Sem. OC, class 2, lab. 4, cr. 3. Prerequisites: BCM 345, BCM 350 and BCM 380.

Forecasting the costs to construct commercial building projects in accordance with project plans and specifications. Emphasis is on the costs associated with concrete, steel, and site work. Use of computer software is featured.

BCM 380 Concrete Construction

Sem. OC, class 2, lab. 2, cr. 3. Prerequisite: MET 211.

An overview of concrete construction, including material composition, behavior and handling of concrete, formwork, and concrete reinforcement.

BCM 400 Analysis of Construction Management

Sem. OC, cr. 3. Prerequisite: senior standing.

Analysis of construction management techniques studied during a minimum of 10 weeks of work. Prior departmental

approval of the type of work is required. A written and oral report to include a description, analysis, and evaluation of management techniques, systems, and controls must be presented during the following academic year to receive credit.

BCM 497 Special Topics on Construction

Sem. OC, class 0-4, cr. 0-4. Hours, subject matter, and credit to be arranged by staff. (May be repeated for credit.)

BCM 499 Special Assignments

Sem. OC, cr. 1-4. (May be repeated for credit.)

Special assignments for students who wish to undertake individual study on approved topics.

BUSINESS**ACCOUNTING****GBA 228 Principles of Accounting II**

Sem. 1 and 2, class 3, cr. 3. Prerequisite: MGMT 200 or equivalent.

Continuation of MGMT 200 with emphasis on accounting for partnerships, corporations, and analysis of financial statements. Accounting for manufacturing firms, managerial controls and cost determination are included.

GBA 290 Independent Study

Sem. 1 or 2, cr. 1-6. Hours and subject matter to be arranged with Business Department.

GBA 320 Introduction to Federal Taxation

Sem. 1, class 3, cr. 3. Prerequisite: GBA 340 or equivalent.

An introductory course that emphasizes the taxation of individuals and sole proprietorships. A study of taxation law cases will be explored, but course will concentrate on practical applications of federal tax form preparation as it pertains to gross income inclusions/exclusions, adjustments, deductions, credits, and penalties. A computerized tax program will be used by the students. Selected topics include: sale of capital assets, deferred compensation plans, IRS practice

and procedures, and personal tax planning.

GBA 330 Cost Accounting

Sem. 1 and 2, class 3, cr. 3. Prerequisite: MGMT 200 or equivalent. Not open to students with credit in MGMT 201. Identical course content to MGMT 201; for accounting majors only.

Accounting for management planning and control, including cost accounting, budgeting, accounting control system, capital budgeting, and use of accounting information in management decisions.

GBA 340 Intermediate Accounting I

Sem. 1 and 2, class 3, cr. 3. Prerequisite: GBA 228 .

Accounting theory and principles of asset valuation and income determination concentrating on cash, receivables, inventory, fixed assets, and intangible assets.

GBA 341 Intermediate Accounting II

Sem. 1 and 2, class 3, cr. 3. Prerequisite: GBA 340 or equivalent.

Accounting theory and principles of liability measurement and stockholders equity valuation with emphasis on contingencies, contributed capital, retained earnings, pensions, leases, and financial statement analysis.

GBA 350 VITA

Sem. 2 , cr. 3. Prerequisite: GBA 320.

This course is a service-learning opportunity for students in the area of personal tax preparation. It provides students with hands on experience in preparing income tax returns for the public. In addition, students gain familiarity with income tax preparation software.

GBA 355 Advanced Managerial Cost Accounting

Sem. 1 and 2, cr. 3. Prerequisite: MGMT 201 or GBA 330.

Advanced cost accounting topics.

GBA 360 Advanced Income Taxation

Sem. 1, class 3, cr. 3. Prerequisite: GBA 320 or equivalent.

An advanced course that emphasizes the taxation of C-Corporations, S-Corporations, Partnerships, Estates, and Trusts.

Course will address tax planning opportunities for shareholders and partners as well as estate planning for individuals. Compliance with federal agencies and the preparation of appropriate tax forms will be explored. Also included is an overview of tax research using computerized retrieval and loose leaf tax services.

GBA 371 Advanced Accounting

Sem. 2, class 3, cr. 3. Prerequisite: GBA 341 or equivalent.

Accounting theory and principles of business combinations, consolidated entities, foreign currency translation, and interim financial reporting and partnerships.

GBA 372 Auditing

Sem. 1, class 3, cr. 3. Prerequisite: GBA 341 or equivalent.

Principles, standards, and procedures applied in auditing the financial records and financial statements of an entity, including the legal aspects and ethical responsibilities of the accountant.

GBA 375 Governmental Accounting

Sem. 2, class 3, cr. 3. Prerequisite: GBA 340 or equivalent.

Accounting theory and principles for non-profit entities, governmental entities, and schools and hospitals. Distinguishes between for-profit and not-for-profit accounting concepts.

GBA 380 Accounting Information Systems

Sem. 1, class 3, cr. 3. Prerequisites: GBA 341 and MGMT 201 or GBA 330 or equivalents.

Examines the systems for collecting and processing information necessary in planning decision making and the control of business organizations. It covers system development, documentation techniques, database systems, internal control, and application systems. Through projects, students will apply their systems expertise and improve their skills in using applications software such as spreadsheet programs.

BUSINESS

GBG 127 Introduction to Business

Sem. 1, 2 and 3, class 3, cr. 3.

An introductory course which acquaints students with existing operations and problems of business and industry. Includes the role of business as well as specific topics pertaining to establishing, operating, and managing a business.

GBG 260 Business Law

Sem. 1 and 2, class 3, cr. 3. Prerequisite: GBG 127.

A course designed to give students an understanding of laws covering business transactions. Covers uniform commercial code, contracts, negotiable instruments, and sales of personal and real property. The laws governing partnerships, corporations, and individual entrepreneur are included.

GBG 270 Small Business & Entrepreneurial Ventures

Sem. 1, 2 and 3, class 3, cr. 3. GBG 127 and ECON 210 or 251 or 252 and MGMT 201 and GBG 260 and GBM 329.

A study of the basic principles of business operations associated with starting and managing small businesses. Major emphasis is given to strategic planning, organization, direction, and control of the small business. Topics will include marketing, financing, and management techniques.

GBG 290 Independent Study

Sem. 1 or 2, cr. 1-6. Hours and subject matter to be arranged with Business Department.

GBG/GBM 300 Business Internship

Sem. OC, cr. 3. Prerequisite: GBG 127 and consent of instructor.

Open to students in the business degree programs, the Bachelor of Liberal Studies program or the bachelor's degree program in supervision who have completed a minimum of 45 semester hours of course work and have a high academic standing.

GBG 333 Principles of Finance

Sem. 1 and 2, class 3, cr. 3. Prerequisites: GBG 127, ECON 210, or 251 or 252 and MGMT 201 or GBA 330.

Management of the financial affairs of the business; use of financial statements, tools, and concepts for measuring and planning for profitability and liquidity.

GBG 344 Business Ethics

Sem. 1 and 2, class 3, cr. 3. Prerequisites: ENGL 102 and GBG 127 and 45 semester hours.

An examination of the situations and facts which give rise to ethical problems in a business setting, and the discussion of alternate courses of action which might and should be taken. The course introduces students to ethical concepts that are relevant to resolving moral issues in business; to the reasoning and analytical skills needed to apply ethical concepts to business decisions; to identify the moral issues involved in the management of specific problem areas in business; and to provide an understanding of the social and natural environments within which moral issues in business arise.

GBG 351 Organization and Management

Sem. 1 and 2, class 3, cr. 3. Prerequisites: GBG 260, ECON 210 or ECON 251 or 252, MGMT 201 or GBA 330 and GBM 329.

An examination of the modern enterprise from the perspective of the organization and management of its internal operations and the theory and practice of management.

GBG/GBM 390 Undergraduate Special Problems

Sem. OC, cr. 1-3 variable or class 3, cr. 1-3 (maximum 6 hrs.) Prerequisite: Consent of instructor.

Individual participation, supervised reading, laboratory or field experiments, or research in special areas of the general business field.

GBG 405 Business Strategy

Sem. 1 or 2, class 3, cr. 3. Open to Seniors and graduate students only. Prerequisites: Senior Standing, GBG 351, GBI 301, GBM 329.

A capstone course for Business and Accounting students which focuses on the formulation and implementation of business strategy within the enterprise.

GBG 450 Women in Business

Sem. 1 or 2, class 3, cr. 3. Prerequisites: GBG 127 and sophomore status or consent of instructor.

This course is an investigation of the role of women in the contemporary American business setting. The course will focus on: women in a corporate management setting, women in small/entrepreneurial ventures, the development and maintenance of male/female business roles, and the cultural meaning of gender differences in the workplace.

GBG/GBM 490 Independent Study in Contemporary Issues of General Business

Sem. OC, cr. variable 1-3 or class 3, cr. 1-3. variable title. (Maximum 6 hrs.). Prerequisite: consent of instructor.

Special subjects for investigation and experiment according to the individual student's interest and need.

GBI 301 Introduction to International Business

Sem. 1 and 2, class 3, cr. 3. Prerequisites: ECON 251 and ECON 252 and GBM 329 and GBG 333.

This course studies the subject of international business which includes administration, marketing, finance and other broad managerial concerns at the international level. The conceptual base of the course is the basic economic fundamentals that affect trade, finance, and other business activities among countries. Government policies, social and cultural issues in international business activities are also discussed.

MARKETING

GBM 290 Independent Study

Sem. 1 or 2, cr. 1-6. Prerequisite: consent of instructor.

Supervised individual study and research in student's field of interest. The student will propose the investigation desired and, in conjunction with the instructor, develop

the scope of the work to be completed. Hours and subject matter to be arranged with Business Department.

GBM/GBG 300 Business Internship

Sem. OC, cr. 1-3. Prerequisite: consent of instructor.

Open to students in the business degree programs, the Bachelor of Liberal Studies or bachelor's degree program in organizational leadership and supervision who have completed a minimum of 45 semester hours of coursework and have a high academic standing.

GBM 325 Marketing Research

Sem. 1 and 2, class 3, cr. 3. Prerequisites: GBM 329, and MA 153 and STAT 301.

Systematic gathering, recording and analysis of data about problems relating to the marketing of goods and services. Topics include: choice of research design, methods of data collection, survey sampling, analysis and interpretation of data, and preparing the research report. The assessment for this course is based on conducting a marketing research project.

GBM 329 Principles of Marketing

Sem. 1, 2 and 3, class 3, cr. 3. Prerequisites: GBG 127 and MGMT 200 and ECON 210 or ECON 251 or ECON 252.

This course provides a basic understanding of the principles of marketing and the operation of our marketing system. Marketing decision-making will explore the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives. The assessment for this course involves development of a formal situation analysis.

GBM 380 Selling: Principles & Practices

Sem. 1, class 3, cr. 3. Corequisite: GBM 329.

An introductory course which examines the phases of salesmanship: preapproach, approach, demonstration, objections, and closing. This course includes development of a sales force, the role of selling in our economy and the

relationship of personal selling to other elements in the marketing mix. The assessment for this course involves preparation of a sales portfolio.

GBM 381 Principles of Advertising

Sem. 1, class 3, cr. 3. Prerequisite: GBM 329.

Provides an understanding and evaluation of the advertising function within the modern business environment. Strategic advertising planning emphasizes the design, management, and integration of a firm's promotional strategy. Course covers history of advertising; the advertising agency; budgeting; advertising media including: print, broadcast, outdoor, specialty, and supplementary forms. The assessment for this course involves preparation of an advertising campaign.

GBM 385 Consumer Behavior

Sem. 1 and 2, class 3, cr. 3. Prerequisite: GBM 329.

An interdisciplinary survey of consumer behavior theory focused on psychological, sociological, and cultural influences on consumer choice and use of products and services. Topics include personality, societal influences, information processing, information search, product choice, purchase, and postpurchase activities. Business applications to promotion, product design, distribution, pricing, and segmentation strategies are also emphasized. The primary assessment instrument involves preparation and critique of consumer behavior research.

GBM 388 Principles of Retailing

Sem. 1, class 3, cr. 3. Prerequisite: GBM 329.

The operations of retail establishments are examined. The topics include operations planning, buyer behavior, store design, location, store layout (exterior and interior), human resource management, merchandise management, pricing strategies, promotional strategies, financing, and a discussion of the future of retailing. Significant developments in the social, economic, technological, and legal aspects are emphasized. The course assessment involves preparing a thorough retail analysis.

GBM 389 Marketing Seminar

Sem. 1 and 2, class 3, cr. 3. Prerequisites: GBM 329 and GBM 381.

Integration of marketing courses to relevant marketing problems through the analysis of cases and use of a marketing simulation. This capstone course is expected to establish the basis for strategic marketing, planning, and the practice of marketing decision making.

GBM 425 Sports Marketing

Sem. 1 or 2, class 3, cr. 3. Prerequisites: GBM 329 or consent of instructor.

This seminar is designed to introduce students to the complex and diverse nature of sports marketing. A framework will be presented to help explain and organize the strategic sports marketing process. Students will explore not only major league/professional sports marketing, but also minor league, collegiate, and recreational levels of the field. The student will gain an appreciation for the growing popularity of women's sports and the globalization of sports.

CHEMISTRY

CHM 103 Chemistry & Society

Sem. 1, 2, 3, class 2, lab. 3, cr. 3. Prerequisite: GNC 064 or equivalent.

For students with no background in chemistry. Prepares students for entry into CHM 119, or CHM 111. May be used as lab science credit for students not enrolled in the Schools of Science, Engineering, Health Science, Technology, Agriculture, or Nursing.

CHM 111 General Chemistry

Sem. 1, class 2, lab. 3, cr. 3. Required of all freshmen in the Schools of Agriculture and Health Sciences who are not in CHM 115; required of students in the School of Consumer and Family Sciences in retailing, textile, RHI, and dietetics options who are not in CHM 115. Prerequisites: 2 years of high school algebra, MA 153 or higher. Does not carry credit toward graduation in the School of Science.

Metric and S.I. Units; dimensional analysis; density, the atomic concept, including elements, compounds, and mixtures; the mole concept; equations and stoichiometry; atomic structure; spectra; the

periodic table; chemical bonding; gases, descriptive chemistry of the common elements.

CHM 112 General Chemistry

Sem. 2, class 2, lab. 3, cr. 3. Prerequisite: CHM 111 or equivalent. Does not carry credit toward graduation in the School of Science.

Continuation of CHM 111. Liquids and solids; solutions; chemical kinetics; equilibrium; acids and bases; oxidation and reduction; electrochemistry; descriptive chemistry of the metals and nonmetals; introduction to organic chemistry; nuclear chemistry.

CHM 115 General Chemistry

Sem. 1, class 2, rec. 1, lab. 3, cr. 4. Required of students majoring in biology, chemistry, and physics and some students in engineering. Note: A diagnostic placement test must be taken by all students enrolled in CHM 115 prior to the beginning of the fall semester. Corequisite: MA 223 or MA 161 and one year high school chemistry with a C or better.

Stoichiometry; atomic structure; periodic properties; ionic and covalent bonding; molecular geometry; gases, liquids, and solids; thermochemistry; descriptive chemistry of metals and nonmetals.

CHM 116 General Chemistry

Sem. 2, class 2, rec. 1, lab. 3, cr. 4. Prerequisite: CHM 115 or equivalent.

A continuation of CHM 115. Solutions; quantitative equilibria in aqueous solution; introductory thermodynamics; oxidation-reduction and electrochemistry; chemical kinetics; further descriptive chemistry of metals and nonmetals.

CHM 119 General Chemistry

Sem. 1 and 2, class 2, lab. 3, cr. 3. Prerequisites: 1 year high school chemistry with a C or higher or CHM 103 with a C or higher and 4 semesters of high school academic math.

A survey of general, organic, and biological chemistry. Intended primarily for students in the nursing program, but may be taken by others with the consent of the instructor.

CHM 255 Organic Chemistry

Sem. 1, class 3, cr. 3. Prerequisite: CHM 112 or CHM 116. Corequisite: CHM 255L.

A study of aliphatic and aromatic hydrocarbons and their simple derivatives in terms of (a) structure, bonding, etc.; (b) general synthesis and reactions; and (c) a logical modern rationale for fundamental phenomena as supported by reactivity orders, orientation effects, stereochemistry, and relative rates.

CHM 255L Organic Chemistry Laboratory

Sem. 1, lab. 3, cr. 1. Corequisite: CHM 255, or consent of instructor.

Laboratory experiments to accompany CHM 255 illustrating methods of separation and the more common techniques and methods for preparing various types of organic compounds.

CHM 256 Organic Chemistry

Sem. 2, class 3, cr. 3. Prerequisite: CHM 255.

A continuation of CHM 255 with various functional groups such as the carboxyl, carbonyl, amino, etc., and including such polyfunctional natural products as carbohydrates and peptides.

CHM 256L Organic Chemistry Laboratory

Sem. 2, lab. 3, cr. 1. Corequisite: CHM 256 or consent of instructor.

A continuation of CHM 255L, but emphasizing methods for identifying organic compounds, including simple "unknowns".

CHM 261 Organic Chemistry

Sem. 1, class 3, cr. 3. Corequisite CHM 263. Prerequisite: CHM 116. Recommended for students majoring in chemistry or chemical engineering.

A comprehensive study of the chemical principles underlying aliphatic and aromatic compounds. The syntheses and reactions of these materials are discussed. Modern theory and stereochemistry are stressed to illustrate the logic inherent in the subject matter and to demonstrate the predictability of many chemical transformations.

CHM 262 Organic Chemistry

Sem. 2 and 3, class 3, cr. 3. Prerequisite: CHM 261. Corequisite: CHM 264.

A continuation of CHM 261, but a broader scope. The chemistry of a variety of functional groups is discussed. Theory is employed extensively to demonstrate the coherence underlying seemingly diverse transformations. Qualitative organic analysis is introduced, with particular emphasis on spectroscopic methods.

CHM 263 Organic Chemistry**Laboratory**

Sem. 1, lab. 3, cr. 1. Corequisite: CHM 261.

Laboratory experiments designed to illustrate the lecture material of CHM 261. Elementary laboratory techniques essential to organic chemistry are introduced followed by the actual syntheses and purification of compounds discussed in CHM 261.

CHM 264 Organic Chemistry**Laboratory**

Sem. 2, lab. 3, cr. 1. Prerequisite: CHM 261; Corequisite CHM 262.

A continuation of CHM 263 in that the experiments are designed to illustrate principles discussed in CHM 262. A major portion of the course is devoted to methods employed in organic qualitative analysis. The student is expected to identify several unknown compounds and mixtures.

CHM 290 Selected Topics in Chemistry for Lower-division Students

Sem. 1, 2 and 3, cr. 1-4.

CHM 290E Chemistry for Elementary Education

Sem. 1, class 1, lab. 2, cr. 2.

An applied course in chemistry for Elementary Education Majors only. This course is designed to illustrate the basic principles of chemistry that can be practically transferred to students in an elementary school setting.

CHM 321 Analytical Chemistry I

Sem. 1, class 3, lab. 4, cr. 4. Prerequisites: CHM 1116 and CHM 256.

Quantitative measurements on complex chemical systems that show matrix ef-

fects or require isolation of a component prior to its determination; general approaches to quantitative problems at the trace level; critical comparisons of competitive procedures with emphasis on principles of separation processes, including chromatography; recognition and evaluation of possible sources of error; approaches for optimizing conditions so as to minimize time and/or effort required to attain prescribed levels of accuracy and precision.

CHM 333 Principles of Biochemistry

Sem. 1 and 2, class 3, cr. 3. Prerequisite: A 1 semester or a 1 year course in organic chemistry.

Structure and function of biologically important molecules. Intended for students in life sciences.

CHM 372 Physical Chemistry

Sem. 2, class 4, cr. 4. Prerequisites: MA 224 or MA 162, PHYS 221, and CHM 255/256, CHM 321 or equivalents. Required for students minoring in chemistry.

Principles of physical chemistry with emphasis on chemical thermodynamics and kinetics. Intended primarily for students in the life sciences.

CHM 481 Environmental Chemistry

Sem. 1, class 3, cr. 3. Prerequisite: CHM 321 or CHM 323.

Survey of chemical aspects of environmental problems and the application of chemistry to their solutions. Topics will include atmospheric pollution problems, ground water pollution and waste disposal problems, inorganic water pollutants, and the occurrence and fate of toxic organic compounds and other substances in the environment.

CHM 490 Selected Topics in Chemistry for Upper-Division Students

Sem. 1, 2 and 3, SS., cr. 1-4.

CIVIL ENGINEERING TECHNOLOGY**CET 209 Land Surveying & Subdivision**

Sem. 2, class 1, lab. 6, cr. 3. Prerequisites: BCM 112, BCM 212 and CGT 290.

Theory and practice of land surveying,

subdivision, filing and recording deeds, U. S. governmental survey of public lands, laws of land surveying, descriptions and area computations for land surveys. Subdivision planning, calculations and plotting, water main layouts, storm and sanitary sewer calculations and layouts. Street plans and profiles.

CET 253 Hydraulics & Drainage

Sem. 1 or 2, class 3, cr. 3. Prerequisites: MA 153 and MA 154.

Basic hydrostatics, Bernoulli's equation, flow in water and sewer lines, overland and ditch drainage, and culvert size determination.

CET 299 Civil Engineering Technology

Sem. OC, cr. 1-4.

Hours to be arranged with the staff. Primarily for third and fourth semester students. Subject matter to be assigned by the staff.

COMMUNICATION

COM 114 Fundamentals of Speech Communication

Sem. 1, 2 and 3, class 3, cr. 3.

A study of communication theories as applied to speech; practical communicative experiences ranging from interpersonal communication to small group process with a focus on speaking in standard speaker-audience situations.

COM 204 Communication & Social Knowledge

Sem. 1, class 3, cr. 3.

Introduction to the principles of communication pertinent to the study of human understanding and social knowledge. Emphasis in this course will be upon the genres of theory as practiced in current scholarship and communication disciplines.

COM 212 Approaches to the Study of Interpersonal Communication

Sem. 1 and 2, class 3, cr. 3.

A study of basic characteristics of human verbal and non-verbal communication and the theoretical and practical implications of these characteristics for personal relationships.

COM 240 Introduction to Oral Interpretation

Sem. 2, class 3, cr. 3. Prerequisite: COM 114.

Oral interpretation of prose, poetry, and dramatic dialogue based on careful study of meaning and emotional content.

COM 250 Mass Communication & Society

Sem 1 and 2, class 3, cr. 3.

A survey of the print, broadcast, and film media in their relationship and influence on society. Study topics include: mass communication theories, documentaries, commercialism, news media, media effects and control, feedback, educational broadcasting, and audience analysis.

COM 251 Introduction to the Electronic Media

Sem. OC, class 3, cr. 3.

A study of the ways in which ideas are expressed through techniques unique to the language of radio, television, and film. Course focuses on scenes, camera and lens movement, tempo, editing concepts, montage, sound perspective, fades, segues, and other special effects prerequisite to effective communication through electronic media.

COM 252 Journalistic Writing

Sem. 1O, class 2, lab. 2, cr. 3. Prerequisite: COM 250.

Journalistic writing for print media. Emphasis is on style, news values, and story construction. Extensive practice in writing various types of news stories.

COM 253 Introduction to Public Relations

Sem. 1 and 2, class 3, cr. 3. Prerequisite: COM 318.

An analysis of public relations theory and practice from their origins to the present. From a communication perspective, the course examines public relations environments, audiences, and message strategies.

COM 300 Introduction to Communications Research Methods

Sem. OC, class 3, cr. 3.

Introduction to the development and application of historical, critical and empiri-

cal research methods pertinent to communication problems. Fundamental concepts of problem identification, sampling surveys, historical sources, critical models, reliability and validity of both measurement and research design in communication research.

COM 314 Advanced Public Speaking

Sem. 2O, class 3, cr. 3. Prerequisite: COM 114.

Development of a marked degree of skill in the composition and delivery of various types of speeches; special emphasis on speeches related to the student's major vocational area.

COM 315 Speech Communication of Technical Information

Sem. 1, class 3, cr. 3. Prerequisite: COM 114. Open only to students enrolled in the School of Technology.

The organization and presentation of information of a practical technical nature. Emphasis is on the study, preparation, and use of audio-visual materials in oral presentations.

COM 318 Principles of Persuasion

Sem. 1 and 2, class 3, cr. 3. Prerequisite: COM 114.

Persuasion and its effects, ranging from individual influences to societal impacts. Various perspectives and models of persuasion are examined, including classic and modern approaches. Both theoretical and pragmatic considerations are introduced.

COM 320 Small Group Discussion

Sem. 1E, class 3, cr. 3. Prerequisite: COM 114.

A study of group thinking and problem-solving methods; participation in and evaluation of committee and informal discussion groups. Focus on the roles, networks, and messages employed by small group communicators.

COM 324 Introduction to Organizational Communication

Sem. 2, class 3, cr. 3. Prerequisite: COM 114.

An introduction to fundamental concepts and basic research related to communication behavior in organizational settings.

COM 325 Interviewing: Principles & Practices

Sem. OC, class 3, cr. 3. Prerequisite: COM 114.

Theory and practice of methods in selected interview settings: informational, employment, and persuasive. Emphasis on communication between two persons, questioning techniques, and the logical and psychological bases of interpersonal persuasion.

COM 330 Theories of Mass Communication

Sem. OC, class 3, cr. 3.

An examination of mass communication theories and theorists. Readings and discussion of McLuhan, Lippmann, DeFleur, Lazarsfeld, Schramm, Stephenson, and other significant contributors.

COM 358 Newspaper Reporting

Sem. OC, class 3, cr. 3. Prerequisite: COM 252.

Study of, and practice in, methods of journalistic research and presentation; preparation of in-depth newspaper stories based on student research.

COM 376 Communication & Gender

Sem. 1, class 3, cr. 3.

Course is based on the assumption that studies of gender and communication are intertwined. Focus is on communication processes that create symbols of gender.

COM 415 Discussion of Technical Problems

Sem. 2, class 3, cr. 3. Open only to students enrolled in the School of Technology.

Principles of speech communication related to interpersonal communication, interviewing, and group discussions on technical topics and problems; the course offers practice in using these models in situations typically encountered by the technologies.

COM 435 Communication and Emerging Technologies

Sem 1 and 2, class 3, cr. 3. Prerequisite: COM 114 and COM 252

Both historical and contemporary perspectives of the reciprocal influence of new and changing technologies and the processes and practices of communication. The im-

pact of print, telegraph, telephone, radio, and television will be surveyed along with cable systems, direct broadcast satellites, and video text.

COM 490 Internship in Communication
Sem. 1, 2 and 3 as required, class 1-6, exper. 1-6, cr. 1-3. Prerequisite: Consent of instructor. May be repeated for a maximum of 6 credits.

Experiential, supervised training in public relations, journalism, telecommunication, oral interpretation, speech education, organizational communication, or interpersonal communication. Usually given in junior or senior year. Usually gives 2 credits per internship experience.

COM 491 Special Topics in Communication

Sem. 2 and as required, cr. 1-3. Prerequisite: COM 114. May be repeated for a maximum of 6 credits.

Intensive study of selected topics, varying from semester to semester, from the literature or practice of communication (eg., business and professional communication). Course content will be drawn from areas not dealt with in the regular curriculum and may include such topics as business communication and human resource management.

COMPUTER GRAPHICS TECHNOLOGY

CGT 110 Computer Graphics Technology

Sem. 1 and 2, class 2, lab. 3, cr. 3. Corequisite: MA 153.

This course is an introductory CAD course that emphasizes the generation of graphical information. Topics include: orthographic projection, isometric projection, detail and assembly drawings, geometric construction and layouts, dimensioning practices, auxiliary views, and section views. Problems used in this class require logical problem solving techniques and the use of good CAD practices.

CGT 290 Computer-Aided Drafting & Design

Sem. 1, 2 and 3, class 2, lab. 3, cr. 3. Prerequisite: CGT 110.

This course is an intermediate CAD course that emphasizes the generation and manipulation of 3D solid models. Topics include: model construction, model editing, model presentation, model to drawing conversion, and advanced dimensioning practices. Problems solved in this class require the application of logical problem solving techniques and the use of good CAD practices.

COMPUTER-INTEGRATED MANUFACTURING TECHNOLOGY

CIMT 243 Automated Manufacturing Processes

Class 2, lab 2, cr. 3. Prerequisite: IET 104 and CPT 175E.

The study of automated manufacturing machinery including robotics, automated storage and retrieval systems, quality monitoring systems, and milling operations.

CIMT 244 Automated Manufacturing II
Class 2, lab 2, cr. 3. Prerequisite: CMT 243.

Shop floor components of computer-integrated manufacturing are introduced. Emphasis is focused on current applications and programming practices of various computer automated manufacturing processes and technologies. Topics include: CAD/CAM integration, computer-assisted numerical control programming, computer-assisted quality control, and automatic identification.

COMPUTER SCIENCE

CS 140 Introduction to Data Processing (Visual Basic)

Sem. 1 and 2, class 3, cr. 3. Corequisite: MA 153. Not available for credit towards graduation in the School of Science or for computer technology majors. Intended for students who expect to use computers outside the physical sciences and engineering.

Introduction to the Visual Basic programming language and the development of event-driven programs.

CS 220 Programming I for Engineers and Scientists

Sem. 2, class 3, cr. 3. Prerequisite: One semester of mathematics beyond MA 154. Introduction to programming in C++. Course topics include data types, control flow, operators and expressions. Applications for engineers and scientists.

COMPUTER TECHNOLOGY

In order to enroll in a CPT course, a CPT major must have earned a grade of C or better in the prerequisite course(s). A course may be repeated only three times, including withdrawals.

CPT 107 Computer Literacy

Sem. 1, 2, and 3, class 3, cr. 3. Not available for credit to Computer Technology majors.

A complete literacy and familiarization course. Students are familiarized with available microcomputer systems and their use. Requires rudimentary application assignments appropriate to all students.

CPT 141 Internet Foundations, Technologies and Development

Sem. 1 and 2, class 2, lab 2, cr. 3. Prerequisite: The equivalent of MA 111. Students with little or no personal computer experience must take CPT 107 prior to CPT 141. Credit may only be established in one of CPT 141 or CPT 165.

This course explores the history, architecture and development of the World Wide Web. Current tagging and scripting languages are covered in a tool independent environment. Topics also include authoring tools, design, graphic and multimedia formats, and commerce, implementation and security issues.

CPT 155 Introduction to Computer Programming

Sem. 1 and 2, class 3, cr. 3, or class 2, Lab. 2, cr. 3. Prerequisite: CPT 172.

This course introduces fundamental computer programming concepts. Topics include problem solving and algorithm development, programming standards, variables, data types, operators, decisions, repetitive structures, modularity, arrays,

sequential files, programming with objects, user interface construction, and software testing and debugging. The concepts and skills learned in this course are transferable to a wide variety of contemporary programming languages and software development tools.

CPT 172 Introduction to Application Development

Sem. 1 and 2, class 3, cr. 3 or class 2, lab. 2, cr. 3. Prerequisite: the equivalent of MA 111. Students with little or no personal computing experience must take CPT 107 prior to CPT 172.

This course introduces the development of information systems through the use of a database. Topics include business information systems, systems and application development, database management systems, problem solving, logic, data types, and programming using database technology. Given a database design and application requirements, students design, construct, and test a personal computer information system.

CPT 175E Visual Programming

Sem. 1 and 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Corequisite: MA 153. CPT majors cannot use this course.

This course introduces event-driven application development and programming using a visual programming environment. Topics include problem solving and program design; control structures; objects and events; user interface construction; documentation and program testing.

CPT 176 Information Technology & Architectures

Sem. 1 and 2, class 3, cr. 3. Prerequisite: CPT 172.

A conceptual and technological survey of the structure of distributed information systems architectures, operating systems, networking operating systems, data management systems, application development environments, peripheral technology, and user interfaces. Interoperability between these architectural components is explored. Current technology and trends in each architectural element are reviewed.

CPT 188D Microcomputer Database Applications

Sem. OC, class 3, cr. 3. Prerequisite: CPT 107 or equivalent. This course does not carry credit towards degree requirements in computer technology.

A study of relational databases and their applications with special emphasis on the proper techniques of database construction. Instruction will center around learning how to design database and operate a database management system in a Windows environment. Students will build projects and develop systems for the storage, manipulation, and retrieval of large amounts of data on the personal computer. This course is designed for non-computer technology majors who have had a modest exposure to computers.

CPT 188S Microcomputer Spreadsheet Applications

Sem. 1 and 2, class 3, cr. 3. Prerequisite: CPT 107 or equivalent. This course does not carry credit towards degree requirements in Computer Technology.

An expanded study of microcomputer spreadsheets. Students will learn how to properly design spreadsheets and the necessary commands to provide solutions to business-related problems. Significant time will be devoted to gain an understanding of how to develop spreadsheets that model the calculations involved in financial applications. This course is designed for non-computer technology majors who have had a modest exposure to computers.

CPT 188W Advanced Word Processing

Sem. 1 and 2, class 3, cr. 3. Prerequisite: CPT 107 or equivalent. This course does not carry credit toward degree requirements in Computer Technology.

An extended study of word processing and its practical application in business and technology. A project-oriented approach will be utilized to illustrate word processing problems. Students will learn how to use word processing in a Windows environment to perform: document enhancement, merging of documents and database, incorporation or spreadsheet tables into documents, and applying desk-

top publishing techniques to documents. This course is designed for non-computer technology majors who have had a modest exposure to computers.

CPT 230 Data Communications

Sem. OC, class 3, cr. 3. Prerequisite: CPT 176.

This course provides an introduction to both Local Area Networks (LANs) and Wide Area Networks (WANs). Modem technology, standards and practices are explored. Three architectural models are used to illustrate protocol relationships and operational characteristics of both packet and circuit switched networks. Business issues from both provider and user perspectives are discussed. Current technology and trends in each architectural element are reviewed.

CPT 255 Programming for the Internet

Sem. 1 and 2, class 3, cr. 3 or class 2, lab. 2, cr. 3. Prerequisite: CPT 141 and CPT 155.

This course introduces programming techniques used to develop dynamic Internet and intranet applications. Topics include client-side scripting, server-side scripting, and their appropriate use. The students will gain practical experience using contemporary scripting technologies in laboratory-based assignments.

CPT 267 Introduction to C++ Language Programming

Sem. 1 and 2, class 3, cr. 3, or class 2, lab. 2, cr. 3. Prerequisite: Any prior programming experience or course.

An introduction to C++ language programming for persons with prior programming experience. Course topics include data types, control flow, operators, and expressions, and an introduction to class construction including other object-oriented concepts and constructs. Applications designed for business, manufacturing, or technology, depending on audience.

CPT 272 Database Fundamentals

Sem. 1 and 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: CPT 141 and CPT 155.

A study of relational database concepts. These concepts include data design, modeling and normalization; the use of Structured Query Language (SQL) to define, manipulate and test the database; programmatic access to a database and practical issues that database developers must handle.

CPT 276 Systems Software and Networking

Sem. 1 and 2, class 3, lab 2, cr. 4. Prerequisite: CPT 176.

Introduction to a wide range of topics in the data communications field including: vocabulary, hardware, issues, trends, network protocols, network operating systems, and directory services. The students will gain hands-on experience in the laboratory with installing and configuring network system platforms and services.

CPT 280 Systems Analysis and Design Methods

Sem. 1 and 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: CPT 155 and CPT 176.

Comprehensive introduction to information systems development. Topics include the systems analyst, the systems development life cycle, methodologies, development technology, system planning, project management, systems analysis, systems design, systems implementation and systems support. Introduction to tools and techniques for systems development.

CPT 285 Topics and Programming Languages

Sem. OC, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: Dependant on course content.

A programming course in one or more programming languages not covered in other CPT courses. Application of structured or event-driven program design, construction, debugging, testing and documentation techniques. Topics, projects and languages vary with course offerings.

CPT 299 Computer Technology (Variable Title)

Sem. OC, class 0-3, lab 0-6, cr. 1-6. Prerequisite: Consent of instructor may be required.

Hours and subject matter to be arranged by staff. Individual study under directed leadership of professor. Primarily for students with special aptitudes. Courses may be repeated for credit up to six hours.

CPT 310 Career Planning and Placement Seminar

Sem. 1 or 2, class 1, cr. 1. Prerequisite: Junior standing in Computer Technology.

This seminar is an orientation to the job search activities and information systems and telecommunications career planning for Computer Technology students about to enter the work force. Guest speakers offer job-hunting tips, relate their work experiences, and describe career opportunities. Students investigate their own transferable and technical skills, and their personal priorities and consider how to find matching professional positions.

CPT 350 Object-Oriented Programming

Sem. 1 or 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: CPT 255.

This course focuses on using object-oriented programming languages in the development of modern business applications. Topics include object-oriented design, encapsulation, object interfaces, inheritance, aggregation, abstract classes, polymorphism, data structure, and exception handling.

CPT 361 Software Redesign Using COBOL

Sem. 1 or 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: CPT 255 or CPT 267.

An introduction to COBOL programming with an emphasis on redesigning legacy COBOL applications to extend their useful lifetime in contemporary organizations. Topics include user interface redesign, structured design, object-oriented programming, and transition from conventional files to databases. Students learn to analyze existing programs to isolate legacy code problems, design solutions to those problems, develop and test solutions, and integrate solutions into software libraries.

CPT 372 Database Development

Sem. 1 or 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Credit may only be established in either CPT 372 or CPT 482, not both. Prerequisite: CPT 272.

This course explores some of the programmatic extensions to Structured Query Language (SQL) supported by today's leading Relational Database Management Systems (RDBMS) vendors. Topics include stored procedure and trigger design and implementation; query optimization to enhance performance and data transformation to enhance interoperability of data.

CPT 380 Requirements Discovery and Modeling

Sem. 1 or 2, class 3, cr.3. Prerequisites: CPT 272 and CPT 280.

This course is an advanced study of systems analysis and design, focusing on object-oriented methods, techniques and tools. Topics include object-oriented methods and techniques to analyze a business problem and design and implement a solution, use-cases, object models, requirements gathering, effective communication, project management, can cost-benefit analysis. Emphasis is place on working in a team environment to model and design a solution to a real life business problem.

CPT 382 Data Analysis and Database Design

Sem. 1 or 2, class 3, cr.3 or class 2, lab 2, cr. 3. Prerequisite: CPT 280 and CPT 272. Credit may not be established in both CPT 382 and CPT 292.

Model business information requirements and design databases to fulfill them. Investigate data architectures, development approaches for operational and data warehouse databases, requirements analysis, entity relationship diagramming, data integrity specification, reverse engineering, normalization, data distribution analysis, database design, and structured query language (SQL) code generation. Use computer-aided design and database technology to design and prototype a moderately-sized database.

CPT 385 Advanced Design Techniques

Sem. 1 or 2, class 3, cr.3 or class 2, lab 2, cr. 3. Prerequisite: CPT 380.

This course is an advanced study of system design methods and techniques used by systems analysts to develop information systems. Topics include rapid development concepts, application architecture and system design, transition from object-oriented analysis and models, graphical user interface design, web interface design, prototyping, and commercial software packaging integration.

CPT 388 Topics in Programming Languages (Variable Title)

Sem. OC, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: One 300-level programming course.

Advanced programming topics and skills. Emphasis upon development of maintainable programs, maintenance of existing programs, test data development, module and program testing strategies, interactive programming and other advanced professional topics using a procedural language other than BASIC or COBOL. Large team programming project required.

CPT 392 Database Design and Implementation

Sem. 1 or 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: CPT 272. Credit may only be established in one of CPT 382 or CPT 392.

This course deals with advanced design techniques and physical issues relating to enterprise-wide databases. Topics include advanced normalization, data distribution, distributed database design and replication, storage estimation and allocation, usage analysis, partitioning of very large tables, metadata analysis, data conversion, and load techniques.

CPT 475 Electronic Commerce and Business Implementation

Sem. 1 or 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: CPT 255 and CPT 272.

This course is an in-depth study of electronic commerce and electronic business implementation. The focus is on e-business topics and concepts including business models, electronic payment sys-

tems, infrastructure, implementation concerns, design criteria, solution of business problems through case studies, and related Web topics. Students will develop Internet applications using current Web technology.

CPT 480 Managing Information Technology Projects

Sem. 1 or 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: Senior standing in CPT. This course introduces the application of knowledge, skills, tools and techniques that project managers use to plan, staff, estimate, and manage information technology projects. Special emphasis is placed on learning and applying the concepts of managing scope, risk, budget, time, expectations, quality, people, communications, procurement, and externally provided services. Students will apply project management technology and techniques to business problems.

CPT 482 Database Implementation

Sem. 1 or 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: CPT 382. Credit may only be established in either CPT 372 or CPT 482, not both.

Physical database design, construction, and implementation, including usage analysis, data distribution and replication analysis, storage estimation and allocation, data conversion and load approaches, database programming (with triggers and stored procedures) and query optimization. Students engage in a wide variety of database design, construction, and programming activities using client/server database technology.

CPT 499 Computer Technology (Variable Title)

Sem. 1 or 2, class 0-3, lab 0-6, cr. 1-3. prerequisite: Consent of instructor may be required.

May be repeated for up to six hours. Hours and subject matter to be arranged by staff. This course serves two purposes. First, it may be used to prototype future course offerings. Second, it may be used to underwrite individual and independent student study and projects under the directed leadership of a faculty member, provided the subject matter does

not overlap any other existing CPT course, and subject to current departmental policies and restrictions. Primarily for course prototypes or independent study courses. Independent study requires application, proposal, and departmental approval.

CONSUMER AND FAMILY SCIENCES

(Child Development & Family Studies)

CDFS 211 Development & Growth of Children

Sem. 3, class 3, cr. 3. Prerequisite: 3 hours in psychology or sociology. Available for credit by examination.

Study of the growth and development of children from birth through adolescence. Emphasis on physical growth, emotional and social behavior, cognitive and language development within contexts of family, school, and peer groups. Focus on observational methods.

CDFS 255 Marriage & Family Relationships

Sem. 2, class 3, cr. 3.

Provides further understanding of family relations for those unmarried, those contemplating marriage, or for those married, and for prospective marriage counselors. A functional approach to the interpersonal relationships of courtship, marriage, and family.

CDFS 432 The Family Life Cycle

Sem. 1, class 3, cr. 3.

Focus on contemporary research and theory dealing with the development of the family throughout the life cycle. Study of crises or issues in family life that influence the life cycle (i.e., divorce, violence, dual-career parents).

DEVELOPMENTAL STUDIES

Developmental courses are offered for students who need to upgrade their abilities in certain areas or to remediate an academic deficiency, or who wish to better prepare themselves for future work. None of the courses listed in this section counts toward a degree from Purdue University except GNC 100.

GNC 064 Introductory Algebra

Sem. 1 and 2, class 1, lab 4, cr. 3. Prerequisite: Must test into GNC 064 on Student Assessment and Measurement Test. No credit for graduation.

Introduction to algebra concepts and skills, including real number and variable operations, linear equations, graphing, and systems of linear equations. Emphasis on applications as well as structure. Mastery learning approach (pass/not pass). Pocket calculators used.

GNC 065 Fundamentals of Geometry

Sem. 1, 2 and 3, class 3, cr. 3. Prerequisite: GNC 064 or equivalent. No credit for graduation.

Introduction to fundamental concepts of geometry, including angles, polygons, circles, areas and volumes with an emphasis on problem solving. Pocket calculators and geometry software used. This course satisfies the geometry prerequisite for MA 153.

GNC 071 Reading Enhancement

Sem. 1 and 2, class 2, lab. 3, cr. 3. Does not count towards graduation.

Students apply the reading comprehension process to textbooks and journal articles. Concentration, vocabulary development and reading speed are also addressed.

GNC 100 College Success

Sem. 1 and 2, class 3, cr. 3. Counts toward graduation as an elective in the School of Liberal Arts.

Procedures and practices for the development of good study habits are examined. Includes a personal academic assessment, career exploration, and techniques for better listening, reading, writing, thinking, notetaking, memory and time management.

EARTH & ATMOSPHERIC SCIENCE

EAS 102 Earth Science for Elementary Education

Sem. 2, class 1, lab. 4, cr. 3.

Open only to elementary education majors. Fundamental earth science concepts appropriate for future elementary teachers are presented.

EAS 120 Introduction to Geography

Sem. 1 and 2, class 3, cr. 3.

An introduction to the systematic study of location and spatial variation of natural features. Elements of place, time, distance, and area are considered in relation to the perception of environment, the organization of cultural activities and the utilization of natural resources.

EAS 391E Capstone Environmental Science for Elementary Education

Sem. 1, class 2, lab. 2, cr. 3.

Open only to elementary education majors. Principles of many areas of science are integrated to study environmental problems. Students will learn how to find information on local areas, how to analyze information available, and how to involve elementary school students in environmental learning projects.

ECONOMICS

ECON 210 Principles of Economics

Sem. 1 and 2, class 3, cr. 3. Prerequisite: MA 153. No credit for business majors.

Study of the basic economic institutions and the role they play in defining and achieving the nation's economic goals. Emphasis will be placed on the independent nature of the economic decisions on the individual and society.

ECON 219 Economics for Future Teachers (Introductory)

Sem. 1, class 3, cr. 3. No credit for business majors.

A principles of economics course designed for future social studies, business education, and home economics teachers, and elementary education majors. The purpose of this course is to: 1) introduce the student to basic economic concepts, 2) learn how to apply these concepts in the K-12 curriculum, 3) develop a group or individual curriculum unit, and 4) have access to quality classroom materials, K-12.

ECON 251 Microeconomics

Sem. 1 or 2 and 3, OC, class 3, cr. 3. Prerequisite: MA 153.

Price theory and resource allocation. Emphasis is on developing a detailed understanding of the principles of microeconomic

analysis and their application to understanding price and market behavior.

ECON 252 Macroeconomics

Sem. 1 or 2OC, class 3, cr. 3. Prerequisite: MA 153.

Introduction to macroeconomic theory. The course develops a theoretical framework permitting an analysis of the forces affecting national income, employment, interest rates, and the rate of inflation. Emphasis is placed upon the role of government fiscal and monetary policy in achieving full employment and stable prices.

ECON 352 Intermediate Macroeconomics

Sem. OC, class 3, cr. 3. Prerequisites: ECON 251 and ECON 252. Must have current 2.75 GPA or consent of instructor. Continuation of ECON 252. A more rigorous, general equilibrium treatment of macroeconomic theory with emphasis on the components of the model: determinants of consumption, investment, net exports and foreign exchange rates, the level of unemployment, inflation and the long-run rate of economic growth.

ECON 370 International Trade

Sem. OC, class 3, cr. 3. Prerequisite: ECON 252 or consent of instructor.

Aspects of international economic behavior of households, firms, and national governments. Develops and uses tools of economic theory to discuss the benefits and costs of international economic interdependence and the implications of increasing international linkages of households and firms on the role of national governments.

ECON 380 Money & Banking

Sem. OC, class 3, cr. 3. Prerequisite: ECON 251 and ECON 252 or ECON 210 and ECON 252.

The course analyzes the economics of money, monetary systems, and financial intermediaries in modern industrial economics. Topics considered can include the origin of money and the banking industry, the properties of various monetary systems, the operation of central banks, the regulation of financial intermediaries, and the effects of various monetary policies.

EDUCATION

Courses marked with TE have a prerequisite of admission to the Teacher Education Program. All others require admission to the major.

EDCI 205 Exploring Teaching as a Career

Sem. 1 and 2, class 1, lab.3, cr.3. Corequisite: EDCI 285.

Students will become familiar with the work of teachers and begin to develop their educational philosophies through examining what it means to teach and to learn and the nature and purpose of schools. Students will critically evaluate teaching as their chosen profession. Includes a weekly field-based experience in an elementary school classroom.

EDCI 270 Introduction to Educational Technology & Computing

Sem. 1 and 2, class 1, lab 2, cr. 2.

Addresses fundamentals of educational technology including the integration of instructional design, media, computers and related technologies within the classroom setting.

EDCI 271 Classroom Applications of Educational Technology

Sem. 1 and 2, class 1, cr. 1. Prerequisite or corequisite: EDCI 270.

Explores classroom applications of educational technology including instructional design, media computers and related technologies.

EDCI 285 Multiculturalism & Education

Sem. 1 and 2, class 3, cr. 3. Corequisite: EDCI 205.

This course integrates an understanding of multiculturalism with principles of democratic education. Historical, sociological, cultural, political, philosophical, and pedagogical foundations of multiculturalism are explored and related to issues of pedagogy in a pluralistic society. This course includes an experiential component, through a community-based Theory into Practice field experience.

EDCI 308 Practicum in Reading for the Classroom Teacher

Sem. 2, class 1, lab 4, cr. 3. Prerequisites: EDCI 361, 362, and 363, TE.

For prospective teachers in elementary or secondary schools who desire advanced supervised practice in teaching reading to pupils experiencing reading difficulty. It is required for a minor in reading. The seminar will evaluate diagnostic and tutoring strategies, methods, materials, and achievement.

EDCI 310 Literacy and the Young Child

Sem. 2, class 3, cr. 3

Explores aspects of child development including early developmental influences and preschool learning and their relevance to literacy. Examines methods and materials appropriate for preschool and beginning literacy, instruction and assessment.

EDCI 311 Media for Children

Sem. 1 and 2, class 2, cr.3.

Books, films, filmstrips, records, magazines, and other resources provided in elementary media centers are studied and evaluated to meet the personal and educational needs of pupils in elementary schools. Emphasis is on wide reading of children's books and viewing of many media and their utilization with children.

EDCI 361 Social Studies in the Elementary School

Sem. 1 and 2, class 3, cr. 3. Prerequisites: EDCI 205, 285, EDPS 235, 265, TE. Corequisite: EDCI 362.

Provides students with an overview of the field of social studies, of selected issues in the field, and of best practice strategies for teaching social studies to young children. Encourages participants to reflect on what social studies knowledge, skills and dispositions are most important. How do students learn these most effectively? Given answers to these, how can we best teach social studies? Includes a field-based experiential component.

EDCI 362 Literacy in the Elementary School I

Sem. 1 and 2, class 6, cr. 6. Prerequisites: EDCI 205, 285, EDPS 235, 265, TE. Corequisite: EDCI 361.

Examines how children's oral language develops, how they learn to read and write, and the teacher's role in this process. Using a balanced approach to literacy instruction, students learn to select materials; employ strategies to meet the cognitive and affective literacy needs of all children; and create, integrate, and use data from various forms of assessment to inform teaching and learning processes. Includes a field-based experiential component. Taken concurrently with EDCI 361.

EDCI 363 Literacy in the Elementary School II

Sem. 1 and 2, class 2, lab 3, cr. 3. Prerequisites: EDCI 205, 285, EDPS 235, 265, EDCI 361, 362, TE. Corequisites: EDCI 364, 365.

Focuses on teaching children who experience difficulty acquiring literacy. Assessments of children's strengths and needs are used to plan and evaluate instruction. Strategies for helping children develop more mature literacy understandings are applied in weekly small group instructional sessions. Includes a field-based experiential component.

EDCI 364 Mathematics in the Elementary School

Sem. 1 and 2, class 3, cr. 3. Prerequisites: EDCI 205, 285, EDPS 235, 265, EDCI 361, 362, TE. Corequisites: EDCI 363, 365.

Focuses on teaching mathematics in the elementary school. Students learn what it means to teach mathematics when reasoning, problem solving, communication, and connections are the foci. Includes a field-based experiential component.

EDCI 365 Science in the Elementary School

Sem. 1 and 2, class 2, lab. 2, cr. 3. Prerequisites: EDCI 205, 285, EDPS 235, 265, EDCI 361, 362, TE and 13 credits of approved science content courses. Corequisites: EDCI 363, 364.

Investigates ways children learn science

as a basis for planning, enacting, and assessing science curriculum and instruction. State and national standards, teaching cases, and science lab experiences are used as tools for reflecting on practice. Includes a field-based experiential component.

EDCI 401 Reading Comprehension in the Content Areas

Sem OC, class 3, cr. 3. Prerequisite: EDCI 205, 285, EDPS 235, 265, EDCI 361, 362, TE.

Fulfills requirement for reading endorsement. Reading comprehension related to organizing and remembering expository text for primary, intermediate, and middle school students. Teaching Strategies for general and specific content area comprehension.

EDCI 402 Teaching Kindergarten: Issues & Methods

Sem OC, class 3, cr. 3. Prerequisite: EDCI 205, EDPS 230, PSY 235, EDCI 310, TE.

Examination of developmentally appropriate kindergarten curricula, current issues and practices.

EDCI 466 Integrated Curriculum in the Elementary School

Sem. 1 and 2, class 2, cr. 2. Prerequisite: EDCI 363, 364, 365, Corequisite: EDPS 430.

This course introduces various approaches to integrated curriculum, including historical foundations and current conceptual frameworks. Students develop integrated curriculum units (with relevant goals, materials, activities, and plans) suitable for particular teaching contexts. The course includes a field-based component and is taken concurrently with EDPS 430.

EDCI 490 Individual Research & Teaching Experience

Sem. 1, 2 and 3. Cr. 1—8. Prerequisites: TE and consent of instructor. May be repeated for credit.

Primarily for teacher candidates requiring special individualized experience in research or teaching.

EDCI 496 Student Teaching in Elementary Education

Sem. 1 and 2, cr. 16. Prerequisite: EDCI 466 and EDPS 430.

A one-semester course, comprised of full-time elementary classroom teaching experiences and a student teaching seminar.

EDCI 499A Practicum in Kindergarten

Sem. 1 and 2, cr. 6. Prerequisites: TE; completion of all education methods courses required for the major area including the kindergarten endorsement.

Teaching full-time in a school classroom under the supervision of the teacher in charge of the class and a university supervisor.

EDFA 200 History & Philosophy of Education

Sem. 1 and 2, class 3, cr. 3

How history and philosophy have informed school organization, curriculum and teaching practice. Students develop their own philosophies of teaching. Topics include continuities and discontinuities of schooling, colonial period to present, and conflicting demands placed upon school. Issues of race, class and gender inform debates over school purposes and practices.

EDFA 490 Individual Research & Teaching Experience

Sem. 1, 2, and 3, cr. 1—8. Prerequisites: TE and consent of instructor. May be repeated for credit.

Primarily for teacher candidates requiring special individualized experience in research or teaching.

EDPS 235 Learning & Motivation

Sem. 1 and 2, class 3, cr. 3. Prerequisites: EDCI 205 & 285 or consent of instructor. Co-requisite: EDPS 265.

Introduction to concepts of learning and motivation for classroom teachers. Influence of development, culture and classroom contexts on learning and motivation. Uses of assessment and technology in promoting learning and motivation. A field-based experiential component is included.

EDPS 265 The Inclusive Classroom

Sem. 1 and 2, class 3, cr. 3. Prerequisites: EDCI 205 and EDCI 285 or consent of instructor. Co-requisite: EDPS 235.

Characteristics of students with exceptional needs; strategies for helping students learn and develop in general educational settings. Emphasis placed upon research evidence, case studies, problem-based learning and development of a plan for an inclusive classroom. A field-based component is included.

EDPS 430 Creating and Managing Learning Environments

Sem. 1 and 2, class 3, cr. 3. Prerequisite: EDCI 363, 364, 365; Corequisite: EDCI 466.

This course develops skills in classroom organization and management at the elementary level. It includes classroom discipline, interpersonal skills, administrative aspects of teaching, working with families, building support networks, and a classroom design project.

EDPS 490 Individual Research & Teaching Experience

Sem. 1, 2, and 3, cr. 1-8. Prerequisites: TE and consent of instructor. May be repeated for credit.

Primarily for teacher candidates requiring special individualized experiences in research or teaching.

DUAL LEVEL**Undergraduate-Graduate Courses****EDCI 500 Foundations of Literacy**

Sem. OC, class 3, cr. 3. Prerequisite: 12 credit hours of education and psychology. First graduate course in reading sequence. Considers history, psychology, and current practices in development and remedial reading.

EDCI 504 Children's Literature

Sem. OC, class 3, cr. 3.

A survey of modern and traditional literature for children including authors and illustrators; guidance in uses of children's literature in relation to developmental interests, needs, and skills of children; emphasis is on evaluating materials, reviewing sources, and developing discrimination in choosing children's literature.

EDCI 509 The Process Approach to Writing: Teaching & Assessment

Sem. OC, class 3, cr. 3. Prerequisite: EDCI 306, 362, EDCI 500, or consent of instructor.

Focuses on understanding philosophical and theoretical underpinnings of the process approach to writing, current reading/writing research, and how this approach fits into existing school curricula.

EDCI 511 Teaching Mathematics in the Elementary School

Sem OC, class 3, cr. 3. Prerequisite: EDCI 364, its equivalent, or consent of instructor.

Historical and current curriculum developments in mathematics education with implications for classroom practice; analysis of instructional strategies; cognitive development; use of research results.

EDCI 560 Educational Technology for Teaching & Learning

Sem. OC, class 2, lab. 2, cr. 3.

Applications of microcomputers in educational and training settings. Course stresses appraisal, utilization, and evaluation of microcomputer software and hardware. Implementation and management of computers in instructional environments. Teaching of basic computer literacy concepts to learners of all ages.

EDCI 561 Computer-assisted Instruction

Sem. OC, class 3, cr. 3. Prerequisites: EDPS 530, and EDCI 560, or equivalent, or consent of instructor.

Examines aspects of computer-assisted instruction. Primary focus upon application of effective learning design strategies for computer-mediated instruction within popular CAI languages such as BASIC and PILOT, basic computer managed instruction system including practical classroom considerations.

EDCI 570 Media for Education and Training

Sem. OC, class 1 or 3, cr. 1-3.

Selection, utilization, and evaluation of instructional media and technologies of instruction used in formal education and business/industrial training; emphasis on systematic planning for use of media.

EDCI 571 Preparation of Instructional Materials

Sem. OC, class 1, lab. 4, cr. 3

Design and preparation of a variety of instructional materials for use by instructional materials specialists, teachers, librarians, and audio-visual coordinators in educational situations. Laboratory practice is provided in production of these materials.

EDCI 580 Foundations of Curriculum

Sem OC, class 3, cr.3.

Introduction to the major historical and philosophical sources of curriculum ideas. Significant forces influencing curriculum decision making. Different theoretical approaches to the construction and analysis of curriculum.

EDCI 585 Multicultural Education

Sem. OC, class 3, cr. 3.

Concepts and theories of ethnicity and cultural pluralism; implications for educational change. Examination of value systems and cultural characteristics of various ethnic groups, different ethnic learning styles, ethnically pluralistic curriculum content and instructional materials, and conceptual curriculum design strategies for implementing multicultural change.

EDCI 589 Special Topics for Teachers

Sem. OC, class 1-4, cr. 1-4. May be repeated for credit. Offered only on pass/not pass option.

Examines professional problems of experienced educational personnel through workshops or inservicing. Not available for use in graduate degree programs.

EDCI 590 Individual Research Problems

Sem. 1 and 2, SS, cr. 1-6. Prerequisites: 6 credit hours of psychology and 6 credit hours of education, or equivalent professional training.

Opportunities for students to study particular problems under the guidance of a member of the staff. This plan of individualized instruction may be used in any field of education or vocational education. Does not include thesis work.

EDCI 591 Special Topics in Education

Sem. 1 and 2, SS, cr. 1-4. May be repeated for credit.

Group study of a current problem or special topic of interest to professional educational personnel. Intensive study of research, theory, or practical aspects of a particular issue within the usual graduate class format.

EDFA 500 History & Philosophy of Education

Sem. OC, class 3, cr. 3.

Consideration of the major ideas, trends, and movements in the development of education. This course will be taught under three separate topics as follows: (1) History of Western Education, (2) History of American Education, and (3) Philosophy of American Education. Students may enroll for more than one section.

EDFA 589 Special Topics for Teachers

Sem. OC, class 1-4, cr. 1-4. May be repeated for credit. Offered only on pass/not pass option.

Examines professional problems of experienced educational personnel through workshops or inservicing. Not available for use in graduate degree programs.

EDPS 530 Advanced Educational Psychology

Sem. OC, class 3, cr. 3. Prerequisite: EDPS 230 or 235.

Theories of learning and development, research on instruction and learning, and principles of measurement applied to educational problems.

EDPS 533 Introduction to Educational Research I: Methodology

Sem OC, class 3, cr. 3. Prerequisite: EDPS 230 or 235 or consent of instructor.

An introductory course in educational research methodology that consider the various methods of educational research, the formulation of research hypotheses, and the preparation of research reports.

EDPS 540 Gifted, Creative, & Talented Children

Sem. OC, SS, class 3, cr. 3. Prerequisite: EDPS 230 (235) or equivalent.

Introduction to intellectual, social, and emotional characteristics of gifted youth.

Philosophy of gifted education. Multi-talent concept of giftedness: intellectual, academic, creative, artistic, and leadership. Criteria for selecting instructional materials and methods. Designing learning experiences for the gifted.

EDPS 563 Identification, Evaluation, & Assessment of Exceptional Individuals

Sem. 1, class 3, cr. 3. Prerequisite: course in measurement or consent of instructor.

Advanced procedures for educational assessment of exceptional individuals: norm-referenced and curriculum-based measurement, error analyses, and observational ratings. Adaptations and selections of tests for sensory impairments, behavioral styles, and different intelligence levels and ages.

EDPS 567 Teaching of Exceptional Children

Sem. 2, class 3, cr. 3. Prerequisite: admission to teacher education program or consent of instructor.

Humanistic techniques for managing behavior, development of problem-solving, communication, and social skills in exceptional youth. Curriculum adaptations to facilitate nontraditional teaching approaches for children with alternative behavioral, emotional, and social styles.

EDPS 589 Special Topics for Teachers

Sem. OC, class 1-4, cr. 1-4. May be repeated for credit. Offered only on pass/no pass option.

Examines professional problems of experienced educational personnel through workshops or inservicing. Not available for use in graduate degree programs.

EDPS 590 Individual Research Problems

Sem. 1 and 2, cr. 1-6. Prerequisites: 6 credit hours of psychology and 6 credit hours of education, or equivalent professional training.

Opportunities for students to study particular problems under the guidance of a member of the staff. This plan of individualized instruction may be used in any field of education or vocational education. Does not include thesis work.

EDPS 591 Special Topics in Education
Sem. 1 and 2, cr. 1-4. May be repeated for credit.

Group study of a current problem or special topic of interest to professional educational personnel. Intensive study of research, theory, or practical aspects of a particular issue within the usual graduate class format.

GRADUATE LEVEL

EDCI 604 Teaching Social Studies in the Elementary School

Sem. OC, class 3, cr. 3. Prerequisite: EDCI 361, its equivalent, or consent of instructor.

Social Studies content and place in the modern elementary education curriculum. Materials, instruction techniques, evaluation procedures, and understanding the syntax of the structure of social studies.

EDCI 605 Teaching Science in the Elementary School

Sem. OC, class 3, cr. 3. Prerequisite: EDCI 365 or equivalent, or consent of instructor.

Analysis of historical developments and present trends in elementary school science education; the designing, implementation, and evaluation of science programs; the role of research in present and future developments.

EDCI 608 Individualizing Instruction in the Elementary & Secondary School

Sem. OC, class 3, cr. 3. Prerequisite: completion of a teacher certification program or consent of instructor.

This course explores the foundations underlying individualized instruction, the preparation of individualized instruction materials for the classroom, the role of research in individualized instruction, and the future trends and issues in individualized instruction.

ELECTRICAL ENGINEERING TECHNOLOGY

EET 107 Introduction to Circuit Analysis

Sem. 1, class 3, lab. 3, cr. 4. Corequisite: MA 153.

Voltage, current, resistance, Ohm's Law, Kirchhoff's Laws, resistance combinations, and Thevenin's, Norton's, and superposition Theorems are studied. DC and AC sources are studied and utilized with basic AC terminology described. The performance of ideal transformers, capacitors and inductors, and first order RLC circuits are investigated. Fundamental analog circuits are utilized in the laboratory to enhance the understanding of basic laws and theorems.

EET 109 Digital Fundamentals

Sem. 1, class 2, lab. 3, cr. 3.

This course introduces basic gate and flip-flop logic devices and their application in combinational and sequential digital circuits. Topics include decoders, displays, encoders, multiplexers, demultiplexers, registers, and counters. Logic circuit analysis, implementation of circuits using standard IC chips or programmable logic devices, circuit testing, and troubleshooting are emphasized.

EET 157 Electronics Circuit Analysis

Sem. 2, class 3, lab. 3, cr. 4. Prerequisites: EET 107, MA 153.

Diodes, various discrete and IC regulated power supplies, transistor biasing techniques, and characteristics of small signal amplifiers are studied. Additional topics such as dependent sources, operational amplifiers, non-ideal DC op amp characteristics, waveform generation, and IC fabrication overview are also covered. Circuit fundamentals such as Kirchhoff's laws are utilized in the analysis and design of circuits. Computer-aided analysis of circuits is used.

EET 159 Digital Applications

Sem. 2, class 3, lab. 3, cr. 4. Prerequisite: EET 109.

This course continues the study of combinational and sequential digital applications. The input and output characteris-

tics of the various common logic families and the appropriate signal conditioning techniques for on/off power interfacing are discussed. Also stressed are standard logic function blocks, digital and analog signal interfacing techniques, and memory devices.

EET 196 Introduction to EET Projects

Sem. 1 and 2, class 1, lab. 2, cr. 2 or class 1, lab. 3, cr. 2.

This course explores the EET field. Practical experiences to teach techniques for proper and safe use of basic hand and machine tools are introduced. Techniques for connecting various types of circuits are also covered. The process of fabricating printed circuit boards and introductory processes for using plastic and metal to fabricate custom parts are presented. Verbal and written communication skills are utilized to report project progress and results.

EET 207 AC Electronics Circuit Analysis

Sem. 1, class 3, lab. 3, cr. 4. Prerequisites: EET 157 and MA 154.

AC circuits including the j operator, phasors, reactance and impedance are studied. Circuit laws, network theorems, and the fundamental concepts of Fourier analysis are applied and used in the study of topics such as passive filters, LC filters, amplifiers, resonant circuits, single-phase and three-phase circuits, and elementary magnetic circuits.

EET 209 Introduction to Microcontrollers

Sem. 1, class 3, lab. 3, cr. 4. Prerequisites: EET 159 and CPT 175E or equivalent.

This course is an introduction to microprocessor hardware and software focusing on embedded control applications. Interconnections of components, peripheral devices, bus timing relationships, assembly language programming, debugging, input/output techniques, and use of PC-based software development tools are studied. C programming of microcontrollers is introduced.

EET 214 Electricity Fundamentals

Sem. OC, class 2, lab. 2, cr. 3. Course not open to EET students. Prerequisite: MA 154.

An introduction to elemental electrical components and their characteristics, basic electrical circuit theory, and use of basic laboratory test equipment, electrical motors, and industrial motor controls.

EET 231 Electrical Power & Controls

Summer, class 3, lab. 3, cr. 4. Prerequisites: MA 154 and EET 157.

This course introduces magnetic materials and properties followed by analysis of transformers and power conditioning equipment, induction motors, and single-phase and three-phase power systems. Motor control devices, programmable logic controllers, PLC input and output devices, and power systems communications and monitoring are introduced.

EET 233 Electronics & Industrial Controls

Sem. OC, class 2, lab. 2, cr. 3. Prerequisite: EET 214. Not open to EET students. Familiarization with electronics as applied to industry. Basic theory and application of electronics to controls for industrial equipment and data processing.

EET 257 Power & RF Electronics

Sem. 2, class 3, lab. 3, cr. 4. Prerequisite: EET 207.

This course is a study of the application of circuit analysis techniques to amplifiers used in power and RF electronics, including bipolar junction transistors, field effect transistors, thyristors, RF amplifiers, phase lock loops, switching power supplies, and appropriate applications. Computer-aided analysis of circuits is used.

EET 276 Electronic Troubleshooting Laboratory

Sem. OC, class 1, lab. 3, cr. 2. Prerequisites: EET 157 and EET 159.

An application of troubleshooting techniques and instrumentation in problems typically experienced in electronic systems. The material is presented by identifying and repairing faults in a sophisticated electronic system.

EET 296 Electronic System Fabrication

Sem. OC, class 1, lab 3, cr. 2. Prerequisites: EET 196, 159, 207, and CGT 110.

This course introduces project planning and basic concepts in electronic design automation (EDA). The student develops the project from an engineering rough sketch to a finished and tested printed circuit board by utilization of EDA. New construction and testing techniques are introduced. The final product is presented in an oral and written report. The written documentation is used along with a resume in a job application simulation.

EET 299 Selected Electrical Engineering Technology Subjects

Sem. OC, class 1-6, lab. 1-6, cr. 1-6.

Hours and subject matter to be arranged by staff. May be repeated for up to six credits.

EET 302 Introduction to Control Systems

Sem. OC, class 3, lab. 3, cr. 4. Prerequisite: EET 207.

This first course in industrial controls is applications oriented and includes on-off type open and closed-loop control systems, and analog-based systems. Major topics include relay and programmable controller-based systems.

EET 304 Introduction to Communication Systems

Sem. OC, class 3, lab. 2, cr. 4. Prerequisites: EET 207 and MA 223.

The theory and techniques of sending information (voice, music, data, etc.) from one location to another is studied. This includes signal analysis, AM, FM, and PM, modulation techniques, transmitters, receivers, networks, filters, and antennas through the VHF frequency spectrum. In addition, transmission lines, wireless communication, digital communication, and special topics of current interest are introduced. This course also incorporates a student-based communication system design laboratory.

EET 307 Analog Network Signal Processing

Sem. OC, class 3, lab 3, cr. 4. Prerequisite: EET 257 and MA 224.

An advanced course in network analysis that stresses network theorems and solutions of time-domain and frequency-domain problems.

EET 309 Advanced Imbedded Controllers

Sem. OC, class 3, lab. 3, cr. 4. Prerequisite: EET 209.

This course emphasizes the advanced applications of embedded microcontrollers, including microcontroller architecture, use of advanced programmable counter/timer arrays, analog interfaces, serial communication, and other peripherals. A variety of microcontroller hardware is utilized.

EET 331 Generation & Transmission of Electrical Power

Sem. OC, class 3, lab. 2, cr. 4. Prerequisite: EET 231.

A study of the generation and transmission of electrical energy. Includes modeling and analysis of synchronous alternators, transformers, and transmission lines, plus analytical and computer methods of solving load flow and fault conditions on balanced and unbalanced three-phase systems. Introduces techniques used by utilities for protection and economic operation of power systems.

EET 345 Advanced Digital Systems

Sem. OC, class 3, lab. 3, cr. 4. Prerequisite: EET 159.

Digital system implementation techniques, with an emphasis on digital applications using Applications Specific Integrated Circuits. Computer-aided engineering tools are emphasized along with system considerations, including device selection and testability.

EET 357 Real-time Digital Signal Processing

Sem. OC, class 3, lab. 3, cr. 4. Prerequisites: EET 209 and EET 307.

Architecture, instruction set, and hardware and software development tools associated with a fixed point general purpose DSP VLSI processor are studied.

Fundamental principles associated with the processing of discrete time signals are introduced. Common applications such as waveform generation, FIR and IIR digital filtering, and DFT- and FFT-based spectral analysis and filtering are implemented.

EET 359 PC Interfacing & Applications

Sem. OC, class 3, lab. 2, cr. 4, or class 3, lab 3, cr. 4. Prerequisite: EET 209.

This course emphasizes add-in hardware for personal computers, including selection, design, and construction of interface cards for PCs. Graphical user interface and driver software are used in developing custom applications.

EET 368 Linear Integrated Circuits

Sem. OC, class 3, lab. 2, cr. 4, or class 3, lab. 3, cr. 4. Prerequisite: EET 257

A study of the applications of IC analog integrated circuits. Topics include linear amplifiers, IC specifications, linear and switching voltage regulation, waveform generation, linear and switched capacitor active filters, Norton and operational transconductance amplifiers, and nonlinear circuit applications. Computer-aided analysis of many of these circuits is also presented.

EET 372 Process Control

Sem. OC, class 3, lab. 3, cr. 4. Prerequisite: EET 302.

A study of the elements of signal conditioning and data acquisition systems for monitoring and control. Closed loop analog and digital controllers, characteristics of processes, tuning and performance specifications. Control strategies, including distributed control, feed forward, cascade and ratio control. Power interfacing, including power op amps, SCRs, MOSFETs.

EET 396 Project Development and Management

Sem. OC, class 3, lab. 2, cr. 4. Prerequisite: associate degree in EET.

This is a structured course in electronic projects, with an emphasis on planning and design alternatives to meet cost, performance, and user-interface goals. A software tool is utilized for project management. Students work in teams to solve

problem assignments using guided design techniques. Creativity is stressed, and the different approaches taken by different teams are compared and discussed.

EET 480 Professional Issues in EET
Sem. OC, class 1, cr. 1. *Prerequisite: EET senior standing.*

This course addresses professional ethics, legal issues, professional development, technology transfer, and corporate culture as they relate to graduating EET students. Information relating to personal job and career choices, resumes, and interviewing are included.

EET 483 Network Fundamentals with Microcontrollers

Sem. OC, class 3, lab. 3, cr. 4. *Prerequisite: EET 209.*

The principles of local-area network communications are studied. Emphasis is on hardware, signals, and protocols commonly associated with microcontrollers tied in with the 7-layer OSI model. Various methods of addressing, error checking, and collision detection are studied.

EET 496 Project Design and Development, Phase I

Sem. OC, lab. 2, cr. 1. *Prerequisite: EET 396.*

An extensive individual or small-group design project is carried out with guidance from a faculty adviser. Phase I includes determining customer requirements, considering design alternatives, and issuing a formal project proposal. Software scheduling tools are used extensively. The course concludes with a report and demonstration of functionality of individual hardware and software design blocks.

EET 497 Project Design and Development, Phase II

Sem. OC, lab. 4, cr. 2. *Prerequisite: EET 496.*

This conclusion of the design project begun in EET 496 emphasizes system integration and testing. The course concludes with a formal demonstration of an oral presentation on the finished product and a written report on the final design.

ENGINEERING

ELECTRICAL ENGINEERING

EE 201 Linear Circuit Analysis I

Sem. 2, class 3, cr. 3 (3EE). *Prerequisite or corequisite: MA 261.*

Volt-ampere characteristics for circuit elements; independent and dependent sources; Kirchhoff's laws and circuit equations. Source transformations. Thevenin's and Norton's theorems; superposition. Transient response of RC, RL, and RLC circuits. Sinusoidal steady-state and impedance. Instantaneous and average power.

EE 202 Linear Circuit Analysis II

Sem. 3, class 3, cr. 3 (4 EE). *Prerequisite: EE 201; prerequisite or corequisite: MA 262.*

Continuation of EE 201. Use of computer-aided design programs. Complex frequency plane, resonance, scaling, and coupled circuits. Two-port network parameters. Laplace transform methods. Use of trees, general loop and nodal equations, and matrix formulation.

EE 207 Electronic Measurement Techniques

Sem. 2 or 3, lab. 3, cr. 1. *Prerequisite or corequisite: EE 201.*

Experimental exercises in the use of laboratory instruments. Includes voltage, current impedance, frequency, and waveform measurements. Frequency and transient response. Elements of circuit modeling and design.

FRESHMAN ENGINEERING

ENGR 100 Freshman Engineering

Sem. 1, class 1, cr. 1. *(Available on a pass/not pass only.)*

An introduction to the engineering profession.

ENGR 195E C++ Language Programming for Engineering and Technical Applications

Sem. 1 and 2, class 3, cr. 3. *Prerequisite: CPT 175E or a prior introduction to computer programming language course.*

An introduction to C++ language pro-

gramming. Course topics include data types, control flow, operators and expressions. Applications to engineering and technology.

MECHANICAL ENGINEERING

ME 200 Thermodynamics I

Sem. 2, class 4, (1 hr. of problems), lab. 0, cr. 3. Prerequisite or corequisite: MA 261.

First and second laws, entropy, reversible and irreversible processes, properties of pure substances. Application to engineering problems.

ME 270 Basic Mechanics I

Sem. 1, class 3, cr. 3. Prerequisite: PHYS 152. Corequisite: MA 261.

Fundamental concepts of mechanics: vector operations, forces and couples, free body diagrams, equilibrium of a particle and of rigid bodies. Friction. Distributed forces. Centers of gravity and centroids. First and second moments of areas, lines, and volumes. Applications from structural and machine elements such as bars, trusses, and friction devices. Kinematics and equations of motion of a particle for rectilinear and curvilinear motion.

ENGLISH

ENGL 100 English Composition

Sem. 1 and 2, class 3, lab 2, cr. 4. Depending on student's program, may not count toward graduation.

For students who need an extensive review of the fundamentals of English grammar, syntax, punctuation, and mechanics, or an introduction to some of the essential principles of composition. After successful completion of ENGL 100, students are assigned to ENGL 101.

ENGL 101 English Composition I

Sem. 1, 2 and 3, class 3, cr. 3. Prerequisite for all courses in English except ENGL 100 and any other courses specified by the section in individual cases.

The first semester of the first-year composition sequence. This course is intended to help students write clear and effective prose for their work at the Uni-

versity and beyond. It includes the study of the writing process, matters of grammar, structure, and style, and entails extensive practice in the writing and revising of expository essays.

ENGL 102 English Composition II

Sem. 1, 2 and 3, class 3, cr. 3. Not open to students who have taken ENGL 103 in other divisions of the University.

The second semester of the first-year composition sequence. Students practice critical reading and thinking, and arguing a thesis in clear and effective prose. The course also involves preparation of at least two research papers.

*Students who receive an A in English 101 may, **with their school's approval**, substitute an elective course in English for English 102, if English 102 is required.*

While there are, in most cases, no formal prerequisites for courses in English at the 200 level and above, students are advised to complete first-year English composition requirements before taking such courses.

ENGL 201 The Nature of Literary Study

Sem. 2, class 3, cr. 3. Required of English majors.

A study of literary concepts and critical procedures as applied to representative poetry, fiction, and drama, with practice in critical writing.

ENGL 227 Elements of Linguistics (AUSL 227)

Sem. 1, 2 and 3, class 3, cr. 3. Credit will not be awarded for both ENGL 227 and FLL 261.

A summary of what is known about human language, its structure, its universality, and its diversity; language in its social setting; language in relation to other aspects of human inquiry and knowledge.

ENGL 230 Great Narrative Works

Sem. OC, class 3, cr. 3.

Reading and discussion of great narratives from Homer's *Odyssey* to the present, considering works from a variety of cultures and time periods in order to develop an understanding of their ideas, structures, styles and cultural values.

ENGL 231 Introduction to Literature

Sem. 1 and 2, class 3, cr. 3.

Reading and discussion of great works of various types to develop an understanding of their ideas, structures, and styles. Includes poetry, drama, biography, essay, and prose fiction.

ENGL 232 Thematic Studies in Literature

Sem. OC, class 3, cr. 3. May be repeated once for credit, and subsequently only with permission of the department head.

Examination of a particular theme, such as the hero, death, or the city, and the techniques by which it is treated in various literary works, usually in more than one genre.

ENGL 235 Introduction to Drama

Sem. OC, class 3, cr. 3.

Reading and discussion of plays of various styles from significant periods of dramatic literature aimed at enhancing the understanding and appreciation of the form and content of all drama.

ENGL 237 Introduction to Poetry

Sem. OC, class 3, cr. 3.

How to read poetry intelligently; function of diction, metrics, figures of speech, and theme; place of a poem in history, uses of poetry, etc.

ENGL 238 Introduction to Fiction

Sem. OC, class 3, cr. 3.

Reading and discussion of short stories and seven novels to promote awareness, understanding and appreciation of the range, values, techniques, and meanings of modern fiction.

ENGL 239 Introduction to Biography

Sem. OC, class 3, cr. 3.

Reading and discussion of modern biographies and influential earlier texts. Special attention given to the history of biographical writing and to the study of biography as a recognizable form of writing and a means of understanding and ordering human experience.

ENGL 240 Survey of British Literature: From the Beginnings Through the Neoclassical Period

Sem. 1, class 3, cr. 3.

Surveys authors, periods, and themes of British literature from the beginnings through the eighteenth century.

ENGL 241 Survey of British Literature: From the Rise of Romanticism to the Modern Period

Sem. 2O, class 3, cr. 3.

Surveys authors, periods, and themes of British literature from the late eighteenth century through the modern period.

ENGL 250 Great American Books

Sem. 2E, class 3, cr. 3.

Selected works, such as *The Scarlet Letter*, *Moby Dick*, *Uncle Tom's Cabin*, *Walden*, *Huckleberry Finn*, *Absalom, Absalom!*, *Their Eyes Were Watching God*, *Native Son*, and *Beloved*, closely read and discussed as to their literary qualities and their cultural significance.

ENGL 257 Literature of Black America

Sem. 2, class 3, cr. 3.

A survey of literature written by black American authors. Close attention paid to the history of black literature and to the historical context in which it was written, as well as to the texts of major works by black writers.

ENGL 262 Greek & Roman Classics in Translation

Sem. OC, class 3, cr. 3.

Study of important works of Greek and Roman literature, their intrinsic literary values, and influence on later European and American writing and thinking.

ENGL 264 The Bible as Literature

Sem. OC, class 3, cr. 3.

A study of selections from Old and New Testaments as examples of Hebrew and early Christian literature.

ENGL 266 World Literature: From the Beginnings to 1700 A. D.

Sem. 2, class 3, cr. 3.

World literature in translation. A comparative and chronological survey of the master pieces of Eastern and Western literature.

ENGL 267 World Literature: From 1700 A.D. to the Present

Sem. 1 and 2, class 3, cr. 3.

World literature in translation. A comparative and chronological survey of the master pieces of Eastern and Western literature.

ENGL 286 The Movies

Sem. OC, class 3, cr. 3.

The history and aesthetics of the movies from *The Great Train Robbery* and *The Birth of a Nation* or *Intolerance* to contemporary films. Comparison of the cinematic method with the methods of the drama and the novel.

ENGL 304 Advanced Composition

Sem. 1O, class 3, cr. 3. Prerequisite: Completion of basic composition requirement.

Designed for students who wish additional training in composition beyond the basic requirements. Extensive practice in the writing of mature expository, critical, and argumentative prose.

ENGL 327 English Language I: History & Development

Sem. 1O, class 3, cr. 3. Prerequisite: ENGL 227 or equivalent.

Introduction to the history of the English language, its sounds, inflections, words, and sentence structures. Cultural and historical events affecting this history, and the interplay between language and literature.

ENGL 331 Medieval English Literature

Sem. OC, class 3, cr. 3.

A survey of Anglo-Saxon and Medieval English literature (700-1500 A.D.) through intensive reading of Old English heroic, elegiac, and religious poetry and Middle English romance, allegory, lyric, and drama, exclusive of Chaucer.

ENGL 333 Renaissance English Literature

Sem. 2O, class 3, cr. 3.

A survey of Renaissance literature in England through an intensive reading of representative works by such authors as Spenser, Jonson, and Donne. Shakespeare's plays not included.

ENGL 335 Restoration & 18th Century English Literature

Sem. 1O, class 3, cr. 3.

A survey of Restoration and 18th century literature through an intensive reading of representative works by such authors as Dryden, Pope, Swift, and Johnson (the novel and the drama excluded for the most part).

ENGL 337 19th Century English Literature

Sem. 1E, class 3, cr. 3.

A survey of Romantic and Victorian literature through an intensive reading of representative works by such authors as Wordsworth, Byron, Keats, Tennyson, Browning, and Arnold (the novel excluded).

ENGL 350 Survey of American Literature: From Its Beginnings to 1865

Sem. 1O, class 3, cr. 3.

Emphasizes such major literary figures as Edward Taylor, Franklin, Poe, Hawthorne, Melville, Emerson, Thoreau, and Whitman. The course also treats significant minor writers in their relation to literary movements and ideas and includes the works of minority writers.

ENGL 351 Survey of American Literature: From 1865 to the Post-World War II Period

Sem. 2E, class 3, cr. 3.

Emphasizes such major literary figures as Dickinson, Twain, James, Crane, Frost, T.S. Eliot, Fitzgerald, Hemingway, and Faulkner. The course also treats significant minor writers in their relation to literary movements and ideas and includes the works of minority writers.

ENGL 356 American Humor

Sem. OC, class 3, cr. 3.

Humorous writings of the 19th and 20th centuries are studied as to form and technique and also as a reflection of American life. Special emphasis on Mark Twain.

ENGL 360 Gender and Literature

Sem. 1E, class 3, cr. 3.

An introduction to feminist approaches to study of literature, including poetry, drama, fiction, and/or autobiography. Examines how gender intersects with

race, ethnicity, sexual orientation, and class in shaping authorship, reading and representation.

ENGL 372 American Folklore

Sem. OC, class 3, cr. 3.

The study of Anglo-American traditions: folk tale, song, dance, humor, superstition, games, beliefs, etc., with emphasis on informal discussion of readings, recordings, movies, and lectures.

ENGL 373 Science Fiction & Fantasy

Sem. OC, class 3, cr. 3.

Representative works of science fiction and fantasy examined in relation to both mainstream and popular literature. Emphasis is on technique, theme, and form.

ENGL 375 British Drama to 1800, Exclusive of Shakespeare

Sem. OC, class 3, cr. 3.

A survey of major works of British drama from its medieval beginnings to 1800, including works by such authors as Marlowe, Jonson, Webster, Dryden, Congreve, and Sheridan.

ENGL 377 Major Modern Poetry

Sem. 1O, class 3, cr. 3.

The development of new trends in and the interrelationships among the poetry of Ireland, Britain, and the United States. Poets central to modernism, such as Yeats, Pound, Eliot, Williams, and Stevens, will be emphasized, and students will also read more recent poets.

ENGL 379 The Short Story

Sem. OC, class 3, cr. 3.

An historical and critical study of 19th and 20th century short stories—Irish, British, American, and Continental.

ENGL 381 The British Novel

Sem. 2O, class 3, cr. 3.

A survey of representative British novels of the 18th and 19th centuries by such authors as Defoe, Fielding, Austen, Dickens, Eliot, and Hardy.

ENGL 382 The American Novel

Sem. 2E, class 3, cr. 3.

A survey of representative American novels of the 19th and 20th centuries by such authors as Cooper, Hawthorne, Melville, Twain, James, and Faulkner.

ENGL 383 Modern Drama: Ibsen to the Absurdist

Sem. OC, class 3, cr. 3.

A survey of major works of Continental, English, and American drama, including such authors as Ibsen, Chekhov, Shaw, O'Neill, and Beckett.

ENGL 390 Practicum in Tutoring Writing

Sem. 1, class 1, exper. 2, cr. 2. Prerequisite: consent of instructor.

A practicum to teach undergraduates to teach writing in the one-to-one setting of a writing center.

ENGL 391 Composition for English Teachers

Sem. 1E, class 3, cr. 3. Required for English teaching majors and minors.

Intensive practice in writing exposition and in annotating high school students compositions. This course involves equal amounts of theory and practice in developing writing assignments, responding to student writing, supporting students as they write, and classroom strategies for teaching composition.

ENGL 396 Studies in Literature & Language

Sem. OC, class 3, cr. 3. May be repeated for credit.

A course in the study of a special topic directed by an instructor in whose particular field of specialization the content of the course falls.

ENGL 405 Creative Writing

Sem. 2E, class 3, cr. 3. May be repeated once for credit, subsequently only with permission of the department head. Prerequisite: literature course or permission of instructor.

Practice in writing short prose narratives and poetry for students who have finished freshman composition and wish to develop their skills further. Workshop criticism.

ENGL 420 Business Writing

Sem. 1, 2 and 3, class 3, cr. 3. Prerequisite: completion of freshman composition requirement.

Workplace writing in networked environments for management contents. Emphasizes organizational context, project planning, document management, ethics, research, team writing. Typical genres include management memos, reports, letters, email, resumes (print and online), oral presentations.

ENGL 421 Technical Writing

Sem. 1 and 2, class 3, cr. 3. Prerequisite: completion of first-year composition requirement.

Workplace writing in networked environments for technical contexts. Emphasizes context and user analysis, data analysis/display, project planning, document management, usability, ethics, research, team writing. Typical genres include technical reports, memos, documentation, websites.

ENGL 441 Chaucer's Canterbury Tales

Sem. 1E, class 3, cr. 3.

Critical reading of *The Canterbury Tales* in Middle English with attention to the literary and cultural background.

ENGL 442 Shakespeare

Sem. 2, class 3, cr. 3.

Shakespeare's dramatic craftsmanship, poetry, humor, characterization, psychology, and modern pertinence illustrated in representative tragedies, comedies, and history plays.

ENGL 444 Milton's Major Poetry

Sem. 1O, class 3, cr. 3.

A study of Milton's major poetry, with particular emphasis upon *Paradise Lost* and *Samson Agonistes*.

ENGL 455 Main Currents of American Thought

Sem. OC, class 3, cr. 3.

A survey of dominant ideas and intellectual trends in America from 1607 to the present as revealed through American literature and as related to American life and culture.

ENGL 468 Problems in the History of Criticism

Sem. OC, class 3, cr. 3.

Introduction to the history of literary criticism and theory through study of selected key terms, debates, figures, and texts. Concentration on such topics as representation, authorship, literary form, and interpretation.

ENGL 469 Issues in Contemporary Criticism & Theory

Sem. 1E, class 3, cr. 3

Study of recent critical movements and texts. Emphasis on methods of literary analysis, including philosophical, cultural, and formalist approaches. Discussion of, for example, structuralist, psychoanalytic, feminist, Marxist, poststructuralist, and emerging non-Western critical schools

ENGL 470 Theories of Rhetoric & Composition

Sem. 1O, class 3, cr. 3.

A general introduction to the field of rhetoric and composition. The course provides an overview of studies in written discourse, including studies of the processes and contexts of written discourse as well as methods of research in the field.

ENGL 495 Capstone Seminar for Seniors in English

Sem. 1 and 2, class 3, cr. 3.

This seminar provides senior English majors with the opportunity to demonstrate their skills and knowledge to a special project of their interest that is related to the field of English. Students will work one on one with a faculty member who has expertise in the field of their proposed project.

DUAL LEVEL Undergraduate-Graduate Courses

General prerequisite for all English literature courses numbered above 500: fulfillment of the basic composition requirement and 6 credit hours of literature, or consent of the instructor.

ENGL 589 Directed Writing

Sem. OC, cr. 1-3. Prerequisite: consent of the instructor. May be repeated for credit.
Writing—creative, popular, technical, biographical, historical, philosophical—on subjects of the student's choice. Individual conferences only; no class meetings.

ENGL 590 Directed Reading

Sem. OC, cr. 1-3. Prerequisite: consent of the instructor. May be repeated for credit.
Directs the reading of students with special interests. Guides students in profitable reading in subjects of their own choice. Individual conferences; no class meetings.

ENGL 591 Introduction to Composition Theory

Sem. 1E, class 3, cr. 3.
A survey of major contemporary theories of invention and style, including such topics as heuristics; the aims and modes of discourse; stylistics; readability theories; sentence-combining; error analysis; audience; and evaluation. Applications to teaching will be made.

ENGL 596 Advanced Studies in Literature or Language

Sem. OC, class 3, cr. 3. May be repeated for credit.
Advanced study of a topic within the instructor's fields of specialization. Emphasis on scholarly analysis and research.

ENTOMOLOGY

ENTM 306 Applied Entomology

Sem. OC, class 2, cr. 2.
An introduction to the classification, identification, anatomy, physiology, and ecology of insects. This can be used in fulfillment of laboratory science requirements for students not enrolled in the School of Science.

ENTM 307 Laboratory in Applied Entomology

Sem. OC, lab. 2, cr. 1.
Laboratory in Applied Entomology

FOODS AND NUTRITION

F&N 203 Foods: Their Selection & Preparation

Sem. 1 and 2, class 2, lab. 3, cr. 3. Credit not given for both F&N 203 and F&N 205.
Principles of food selection, preparation, and meal planning.

F&N 303 Essentials of Nutrition

Sem. 1, 2 and 3, class 3, cr. 3. Credit not given for both F&N 303 and F&N 315.
Basic nutrition and its application in meeting nutritional needs of all ages.

FOREIGN LANGUAGES AND LITERATURE

FLL 490 Special Topics in Foreign Languages & Literatures

Sem. 1 and 2, cr. 1-4. Prerequisite: Consent of instructor. May be repeated for credit.

FORESTRY & NATURAL RESOURCES

FNR 382 Natural Resources & Man

Sem. OC, class 3, cr. 3.
A survey of the interrelationships among man, natural resources, and the environment. Course satisfies conservation requirement for teacher certification.

FNR 388 Ichthyology

Sem. OC, class 2, cr. 2. Prerequisites: BIOL 121/122 and BIOL 131/132. Corequisite: FNR 389.
Functional morphology, physiology, behavior, and ecological relationships of fish; classification and identification of freshwater species; introduction to fishery management principles.

FNR 389 Ichthyology Laboratory

Sem. OC, lab 2, cr. 1. Corequisite: FNR 388.
Laboratory on classification and identification of freshwater species; introduction to fisheries management principles.

FNR 501 Limnology

Sem. 1, class 3, cr. 3. Prerequisites: BIOL and CHM core.

Study of aquatic communities in relation to the chemical and physical features of inland water; emphasis on management strategies for lake and stream habitats. One weekend field laboratory is required.

FNR 540 Wetlands Ecology

Sem. 1 or 2, class 2, lab. 4, cr. 3. Prerequisites: BTNY 555 and consent of instructor.

Examination of the biotic and abiotic factors which influence wetlands, including the ecological, socioeconomic, and hydrological values of wetlands. Restoration and wildlife utilization also are examined. Laboratories involve examinations of various aspects of wetland ecology.

FNR 543 Conservation Biology

Sem. OC, class 3, cr. 3. Prerequisite: biology core, or advance ecology course. Introduction to conservation biology.

FRENCH**FR 101 French Level I**

Sem. 1O, class 3, lab. 1, cr. 3.

A beginning course in French. Introduction to the structure of the language. A certain number of basic grammatical rules and idiomatic constructions are covered, with illustrations of their application through simple, graduated textbook readings. Each lesson concentrates on specific rules and constructions with the objective of understanding through reading, and the use of the language through oral exercises. Main objective: supply students with tools to enable them to communicate in French at a basic level.

FR 102 French Level II

Sem. 2E, class 3, lab. 1, cr. 3. Prerequisite: FR 101.

Continuation of FR 101. Completion of study of basic grammar, proceeding in the same manner as FR 101. Reading with understanding and oral practice of the language. Main objective: to enable students to communicate in French at a basic intermediate level.

FR 201 French Level III

Sem. 1E, class 3, cr. 3. Prerequisite: FR 102.

Application of knowledge of grammar and idiomatic constructions to reading with understanding of graduated texts, moderate creative writing, and capability to communicate in French at an intermediate level (simple face-to-face conversation, capability to formulate questions and satisfy basic survival needs). Occasional grammatical review when necessary. Introduction to French literature.

FR 202 French Level IV

Sem. 2O, class 3, cr. 3. Prerequisite: FR 201.

Continuation of graduated readings with the objective of enlarging vocabulary and ability to construct creative sentences. Occasional grammatical review, when necessary. Practice in composition and conversation at an intermediate-high level. Further work in French literature.

GENERAL STUDIES**GS 175 Information Strategies**

Sem. 1 and 2, class 2, cr. 0 or 1.

Designed to build and sharpen students information-gathering skills. Guides students in developing systematic methods for finding, evaluating, and presenting information. Organization and use of electronic and print tools will be explained through discussion, hands-on exercises, and homework assignments.

GERMAN**GER 101 German Level I**

Sem. 1E, class 3, lab. 1, cr. 3.

A beginning course in German. Introduction to the structure of the language. A certain number of basic grammatical rules and idiomatic constructions are covered, with illustrations of their application through simple, graduated textbook readings. Each lesson concentrates on specific rules and constructions with the objective of understanding through reading and the use of the language through oral exercises. Main objective: supply the students with tools to enable them to communicate in German at a basic level.

GER 102 German Level II

Sem. 2O, class 3, lab. 1, cr. 3. Prerequisite: GER 101.

Continuation of GER 101. Completion of study of basic grammar, proceeding in the same manner as GER 101. Reading with understanding and oral practice in the language. Main objective: to enable students to communicate in German at a basic-intermediate level.

GER 201 German Level III

Sem. 1O, class 3, cr. 3. Prerequisite: GER 102.

Application of knowledge of grammar and idiomatic constructions to reading with understanding of graduated texts, moderate creative writing, and capability to communicate in German at an intermediate level (simple face-to-face conversation, capability to formulate questions and satisfy basic survival needs). Occasional grammatical review, when necessary. Introduction to German literature.

GER 202 German Level IV

Sem. 2E, class 3, cr. 3. Prerequisite: GER 201.

Continuation of graduated readings with the objective of enlarging vocabulary and ability to construct creative sentences. Occasional grammatical review, when necessary. Practice in composition and conversation at an intermediate to high level. Further work in German literature.

**HEALTH OFFICE
ADMINISTRATION**

GBH 200 Medical Terminology

Sem. 1 and 2, class 2, cr. 3. Prerequisite: ENGL 101.

An introductory course which provides an overview of the terminology, including roots, prefixes, and suffixes, used in the medical/health professions fields. The various systems in the body are examined, such as the respiratory system, the cardiovascular system, and the nervous system, and the various parts in each system are identified. In addition, terminology as it relates to various symptoms, ailments and medical procedures is studied. The emphasis will be placed upon pronunciation and spelling of the various terms rather than upon an understanding of the operation of the various systems.

GBH 303 Principles of Health Insurance

Sem. 1, class 3, cr. 3. Prerequisite: GBG 127 or consent of instructor.

This course consists of an introduction and overview of health insurance form preparation, filing, refiling, maintaining and follow up. Several types of insurance forms — Universal Medical (HIC), Superbills, Workers Compensation, Medicare, Medicaid, HMOs — will be covered. This course is supplemented by several hands-on experience activities and sample forms with the latest information on electronic claims, and hospital and physician billing especially related to Medicare and Medicaid.

**HEALTH SCIENCE
Elementary Education Majors**

H&S 320 Health Education in the Elementary School

Sem. 1 and 2, class 3, cr. 3. Prerequisite: Admission to the Teacher Education Program; Restricted to Education majors only.

The problems of physical health, mental health, and safety of the school-aged child are considered, with emphasis on ways in which the elementary teacher meets the responsibilities and opportunities for promoting pupil health.

HISTORY

HIST 102 Introduction to the Ancient World

Sem. 1, class 3, cr. 3.

A history of the ancient world (Near East, Greece, and Rome) from its prehistoric origins to its dismemberment in the early Christian era. It is designed to meet the needs of the beginning student of European and world history.

HIST 103 Introduction to the Medieval World

Sem. 2, class 3, cr. 3.

Barbarians, kings, queens, peasants, witches, saints, teachers, students, heretics, Moslems, Jews, Christians, love, death, monks, farm life, city life, ordinary men, women, and children as Europe develops from A.D. 500 to 1500.

HIST 104 Introduction to the Modern World

Sem. 1, 2 and 3, class 3, cr. 3.

Traces the expansion of Europe into the Americas, Africa, and Asia. The French Revolution, nationalism, and the development of Western European states from the era of the Reformation to the present are studied.

HIST 151 American History to 1877

Sem. 1 and 3, class 3, cr. 3.

A study of the development of American political, economic, and social institutions from the early explorations and Colonial settlements through Reconstruction.

HIST 152 United States Since 1877

Sem. 2 and 3, class 3, cr. 3.

A study of the growth of the United States from 1877 to the present. The new industrialism, agrarian problems, depression, the New Deal, the two world wars, the Cold War, and similar topics are analyzed.

HIST 290 Russia: Yesterday, Today & Tomorrow

(POL 290, RUSS 289) OC, class 3, cr. 3.

A comprehensive interdisciplinary view of Russia, stressing those issues in the political, economic technological, and cultural spheres that are most relevant to the current situation. Team-taught course accessible to beginning undergraduates.

HIST 358 The American Business System

Sem. OC, class 3, cr. 3.

A study of the historical development of business methods and institutions in the United States from colonial times to the present. Thematic units cover merchant capitalism, money and banking, entrepreneurs and corporations, industry, government, multinationals, and information-age business.

HIST 367 20th Century American History

Sem. OC, class 3, cr. 3.

A survey of 20th century American history, covering major political and economic developments and related intellectual movements. A parallel consider-

ation of foreign affairs traces the emergence of America as a world power and the effects of her new status on the Western Hemisphere, Europe, and Asia.

HIST 386 History of American Foreign Relations

Sem. 2, class 3, cr. 3.

The history of American foreign relations from the late colonial period to the present. The development of traditional policies, territorial expansion, and reaction to great power status and the Cold War are some of the topics discussed.

HIST 467 Recent American History

Sem. OC, class 3, cr. 3. Prerequisites: HIST 151 and HIST 152.

A study of 20th century American history into the Depression Thirties. Domestic political and social developments are traced from 1914 to 1939, while diplomatic and military events are covered from the early 20th century to 1933. Particular attention is given to First World War and Great Depression.

HIST 468 Contemporary America

Sem. OC, class 3, cr. 3.

An examination of American history since the 1930s. Political, economic, and social developments are covered for the period since 1939, while diplomatic and military are reviewed since 1933.

HIST 492 Seminar in Historical Topics

Sem. 1 and 2, class 3, cr. 3. (May be repeated once for credit.) Restricted to undergraduates: 20 student maximum.

Course description will vary according to specific topic proposed to study.

HIST 493 Interdisciplinary Undergraduate Seminar

Sem. OC, class 1 or 3, cr. 1-3. Same as PHIL 493, POL 493, PSY 493, SOC 493, and THTR 493. May be repeated for credit.

An undergraduate seminar devoted to an interdisciplinary examination of social, economic, political, and intellectual movements, using faculty resources of participating departments. Subject matter will vary. Each offering of the seminar will be approved by a committee of department heads from the sponsoring departments.

DUAL LEVEL

Undergraduate-Graduate Course

HIST 590 Directed Reading in History

Sem. 1 and 2, cr. 1-3. May be repeated for credit.

A reading course directed by the instructor in whose field of specialization the content of the reading falls. Approval of each reading project must be secured from the department.

HORTICULTURE

HORT 102 Fundamentals of Horticulture

Sem. 1, class 3, cr. 3.

Study of the biology and technology involved in the production, storage, processing, and marketing of horticulture plants and products.

INDUSTRIAL ENGINEERING TECHNOLOGY

IET 104 Industrial Organization

Sem. 1, 2 and 3, class 3, cr. 3.

A detailed survey of how the functional activities within a manufacturing enterprise, including product design, development and specification, purchasing, manufacturing planning, production and inventory control, quality control, and administrative support, are planned, organized, staffed, controlled and directed by management with consideration of personnel, safety, policy and human factors in order to achieve productivity objectives.

IET 202 Principles of Industrial Robotics

Sem. OC, class 2, lab. 3, cr. 3 or class 3, cr. 3. Restricted to 3rd or 4th semester AS-IET students or consent of the instructor.

Applications of robotic principles with emphasis on the evaluation, selection and installation of robotic technology in manufacturing systems.

IET 204 Techniques of Maintaining Quality

Sem. 1 or 2, class 3, cr. 3. Prerequisites: MA 154 and STAT 301.

An analysis of basic quality control concepts including quality responsibility, quality improvement techniques, fundamentals of statistics and probability, control charts for variables and attributes, acceptance sampling and standard sampling plans, quality costs and total quality management. Includes six sigma concepts.

IET 224 Production Planning & Control

Sem. 1 or 2, class 2, lab. 2, cr. 3 or class 3, cr. 3. Prerequisites: IET 104, MA 154 and CPT 107.

Pre-production planning of the most economical methods, machines, operations, and materials for the manufacture of a product. Planning, scheduling, routing, and detailed procedure of production control including MRP I and ERP.

IET 250 Fundamentals of Production Cost Analysis

Sem. 1 or 2, class 3, cr. 3. Prerequisites: IET 104 and MA 153.

Surveys of fundamental mechanics of accounting, principles of account classification, financial and operating statements, and the generation of cost data according to cost accounting principles. Surveys the generation of cost data according to the principles of engineering economy. Examines applications of cost accounting data and engineering economy cost data to specific management decision areas through selected case problems.

IET 252 Techniques for Indirect Labor Control

Sem. 1 or 2, class 3, cr. 3. Prerequisites: IET 104.

The study of the characteristics and importance of indirect and service sectors of our business, industrial, and government economy. Topics covered in the course include size and cost factors of indirect and service lab, problems encountered in measurement and control, human relations aspects associated with employees in these areas, selling proposals, and implementing programs.

IET 262 Motion Study & Work Methods

Sem. 1 or 2, class 2, lab. 0, cr. 3 or class 3, cr. 3. Prerequisite: IET 104.

The study of the various techniques of motion study including process charts, operation charts, multiple activity charts, micro and memo motion study, therbligs, the video camera, along with actual practice in their use. Study and application of the basic principles used to develop better methods of performing work.

IET 266 Work Measurement & Incentives

Sem. 2, class 2, lab. 0, cr. 3 or class 3, cr. 3. Prerequisite: IET 104.

A study of the fundamentals of time study and work measurement with actual practice in their use. Includes stop watch time study, measuring work with video camera, the establishment of allowances by both stopwatch and work sampling studies, the establishment and use of predetermined time values, and the construction and use of formulae for work measurement.

IET 268 Plant Layout

Sem. 2, class 3, cr. 3. Prerequisite: IET 104.

Arrangement of stock, machine, layout of aisles, and use of space, and material handling for the highest efficiency of production.

IET 296 Industrial Technology Case Problems

Sem. 2, class 2, cr. 2.

Application of theories developed in the several industrial technology courses to select general case problems—to provide practice in the integration of principles. Open only to IET candidates.

IET 299 Special Studies in Industrial Engineering Technology

Sem. OC, cr. 1-3. Consent of department required.

Opportunity to study specific problems in the field of Industrial Engineering Technology under the guidance of a qualified faculty member within the department.

IET 301 Cost Evaluation & Control

Sem. 1, class 3, cr. 3. Prerequisite: IET 250.

Develops the tools for designing, installing, and improving cost systems in industry, including the establishment of basic standards. Cost systems are examined with reference to estimating, scheduling, facilities planning, and making economic evaluations. Microcomputers will be utilized in this course.

IET 312 Materials Handling

Sem. 1 or 2, class 3, cr. 3. Prerequisite: IET 268.

A survey of materials handling elements, the unit load, packaging, bulk handling, the economics of materials handling, improving existing handling methods, justification for handling equipment, special handling techniques, and the management of the materials handling division in the industrial organization.

IET 344 Introduction to Simulation

Class 2, lab 2, cr. 3. Prerequisite: IET 104, IET 224.

An introduction to simulation techniques using commercial software packages. Topics include modeling new or existing manufacturing systems, capacity analysis, inventory control, and modeling for production scheduling analysis.

IET 364 Total Quality Control

Sem. 1 or 2, class 3, cr. 3. Prerequisite: IET 104.

An introduction to the management of quality in an organization, determining customer needs and wants, basic monitoring schemes, TQM concepts, and assessment methods to further improve the quality system.

IET 451 Monetary Analysis for Industrial Decisions

Sem. 1 or 2, class 3, cr. 3 or class 2, lab. 2, cr. 3. Prerequisite: IET 104 and MA 153. Not open to students who have credit in IET 250.

An introduction to the time value of money and how it relates to capital investments, equipment replacement, production cost, and various engineering technology alternatives.

INTERDISCIPLINARY STUDIES

IDIS 280 Women s Studies: An Introduction

Sem. 1 or 2, class 3, cr. 3.

An introductory survey of the concepts and research data in the new scholarship on women. Topics covered include biology, sexuality, socialization, family and work, creativity, and politics.

IDIS 380 Gender & Multiculturalism

Sem. 1 or 2, class 3, cr. 3

This course expands students understanding of gender issues by exploring the multicultural diversity of women s lives. It examines how race, class, sexuality, and culture interact and shape society and ecology in the United States and in a global context.

IDIS 435 Great Issues I

Sem. 1, class 3, cr. 3.

A consideration of major issues affecting humankind from the perspective of our total experience, with an emphasis on the historical unfolding of those issues and great thinkers answers to them. Focus includes discussions of moral decision-making, political systems, aesthetics, religion and spirituality, our use of symbols, and the character of human nature.

IDIS 436 Great Issues II

Sem. 2, class 3, cr. 3. Need not be preceded by IDIS 435.

A continuation of IDIS 435, examining the further development, in a historical framework, of those issues considered enduring and important. Focus on the development of the diversity of ideas and perspectives in the modern era, including questions of political organization, religion and spirituality, the evolution of science, ethics and modernity, the exercise of power, and the uses of rationality.

IDIS 490 Directed Reading in Interdisciplinary Studies

Sem. 1, 2, and 3, cr. 1-4.

Reading to be done under the direction of the instructor in the particular interdisciplinary field of specialization.

INTERNATIONAL BUSINESS

(See Business)

MANAGEMENT

MGMT 200 Introductory Accounting

Sem. 1, 2 and 3, class 3, cr. 3.

An examination of the basic concepts, procedures, and conventions which underlie financial reporting. Construction and uses of financial statement data.

MGMT 201 Management Accounting I

Sem. 1 and 2, class 3, cr. 3. Prerequisite: MGMT 200 or equivalent. Not open to students with credit in GBA 330.

Accounting for management planning and control, including cost accounting, budgeting, accounting control system, capital budgeting, and use of accounting information in management decisions.

MGMT 445 Investments

Sem. OC, class 3, cr. 3. Prerequisite: ECON 210 or ECON 252. No credit for students in the School of Management.

Examination of investment alternatives relevant to individual investors. Operations of markets in which securities are traded. Special attention to stocks, bonds, options, and investment companies. Theory and application of security valuation and portfolio selection techniques. Evaluation of investment performances.

MARKETING

(See Business)

MATHEMATICAL SCIENCES

MA 111 Algebra

Sem. 1, 2 and 3. Class 3, cr. 3. Prerequisite: GNC 064 or equivalent. For students not prepared for MA 152 or 153. Not available for credit toward graduation in the School of Science.

A review and strengthening of fundamental concepts and skills of algebra, including linear, quadratic, and rational functions, graphing, and problem solving. Pocket calculators used.

MA 137 Mathematics for Elementary Teachers I

Sem. 1. Class 3, cr. 3. Designed for prospective elementary school teachers. Not available for credit toward graduation in the School of Science.

Problem solving. Numerical reasoning including self-generated and conventional algorithms. Whole and fractional number systems, elementary number theory.

MA 138 Mathematics for Elementary Teachers II

Sem. 1 and 2. Class 3, cr. 3. Prerequisite: MA 137 with a C or better. Not available for credit toward graduation in the School of Science.

Continues the study of number systems through integers, rational numbers and real numbers. Quantitative and proportional reasoning as a foundation for algebraic reasoning. Elementary statistical and probabilistic reasoning.

MA 139 Mathematics for Elementary Teachers III

Sem. 2. Class 3, cr. 3. Prerequisite: MA 137 with a C or better. Not available for credit toward graduation in the School of Science.

Geometric, measurement and spatial reasoning in one, two and three dimensions as the basis for elementary school geometry. Metric and non-metric geometry, transformation geometry.

MA 152 College Algebra for Liberal Arts

Sem. 1 and 2. Class 3, cr. 3. Prerequisite: Two years of high school mathematics including one year of algebra or MA 111 or equivalent. Credit for graduation cannot be earned in both MA 152 and MA 153. Not available for credit toward graduation in the School of Science.

This is a course in college algebra for students who do not need the technical skills required for those who are planning to continue with calculus. There will be an emphasis on applied problem solving using functions and graphing techniques. Students with an A or B in MA 152 may continue with MA 154.

MA 153 Algebra & Trigonometry I

Sem. 1, 2, and 3. Class 3, cr. 3. Prerequisite: One year of college pre/academic algebra or MA 111 or equivalent and one year of high school geometry or GNC 065 or equivalent. One year of high school mathematics beyond algebra is recommended. Does not carry credit toward graduation in the Schools of Engineering or Science. Credit for graduation cannot be earned in both MA 152 and MA 153. Not open to students with credit in MA 151. MA 153-154 is a two-semester version of MA 151. MA 153-154 covers algebra and trigonometry for students with inadequate preparation for calculus.

MA 154 Algebra & Trigonometry II

Sem. 1, 2, and 3. Class 3, cr. 3. Prerequisite: Both MA 153 and GNC 065, or 3 years of high school mathematics including Algebra I and II and geometry. Does not carry credit towards graduation in the Schools of Engineering or Science. Not open to students with credit in MA 151. Continuation of MA 153.

MA 161 Plane Analytic Geometry & Calculus I

Sem. 1. Class 5, cr. 5. Prerequisite: MA 153 and 154 or equivalent. Four years of high school academic mathematics strongly recommended. Graduation credit may not be earned for both MA 161 and MA 223.

Plane analytic geometry, differential calculus and an introduction to integral calculus of functions of a single variable, with applications.

MA 161M Plane Analytic Geometry & Calculus I

Sem. 1. Class 4, Lab 2, cr. 5. Prerequisite: MA 153 and 154 or equivalent. Four years of high school academic mathematics strongly recommended. No previous computer experience required. Graduation credit may not be earned for both MA 161M and MA 223.

MA 161M - 162M cover the same concepts and topics as MA 161 - 162. MA 161M-162M uses a learning environment that combines the use of cooperative and computer laboratory experiences to foster an active learning environment.

MA 162 Plane Analytic Geometry & Calculus II

Sem. 2. Class 5, cr. 5. Prerequisite: MA 161. Graduation credit may not be earned for both MA 162 and MA 224.

Continuation of MA 161. Vectors, integral calculus of functions of a single variable, sequences and series, parametric equations and calculus, conics, and polar coordinates, with applications.

MA 162M Plane Analytic Geometry & Calculus II

Sem. 2. Class 4, Lab 2, cr. 5. Prerequisite: MA 161M or equivalent with consent of instructor. Graduation credit may not be earned for both MA 161M and MA 223.

Continuation of MA 161M.

MA 223 Introductory Analysis I

Sem. 1 and 2. Class 3, cr. 3. Prerequisite: MA 154 or 3 years of high school mathematics including algebra I and II, one year of geometry and at least one-half semester of trigonometry. Not open to students with credit in MA 161.

Differential calculus of one variable. Applications to problems in the biological and social sciences and technology.

MA 224 Introductory Analysis II

Sem. 1 and 2. Class 3, cr. 3. Prerequisite: MA 223 or equivalent. Not open to students with credit in MA 162.

Integral calculus of one variable; an introduction to differential equations and multivariable calculus. Applications to problems in the biological and social sciences and technology.

MA 261 Multivariate Calculus

Sem. 1. Class 4, cr. 4. Prerequisite: MA 162 or MA 162M.

Continuation of MA 161-162. Equations of lines and planes, solid analytic geometry, cylindrical and spherical coordinates, vector functions, differential and integral calculus of functions of two or more variables, and an introduction to vector calculus with applications.

MA 261M Multivariate Calculus

Sem. 1. Class 3, Lab 2, cr. 4. Prerequisite: MA 162M or equivalent with consent of instructor.

Covers the same concepts and topics as MA 261, using a cooperative learning environment that combines the use of cooperative and computer laboratory experiences to an active learning environment.

MA 262 Linear Algebra & Differential Equations

Sem. 2. Class 4, cr. 4. Prerequisite: MA 261 or MA 261M.

Linear algebra and elements of differential equations with applications.

MA 351 Elementary Linear Algebra

Sem. OC. Class 3, cr. 3. Prerequisite: MA 261 or MA 261M.

Systems of linear equations, finite dimensional vector spaces, matrices, determinants, and applications to analytic geometry.

MECHANICAL ENGINEERING TECHNOLOGY

MET 102 Production Design & Specifications

Sem. 2, class 1, lab. 5, cr. 3. Prerequisites: CGT 110, MET 162.

The design, evaluation, and documentation of engineering specifications required for manufacturability and assembly are introduced. Emphasis is on CAD-based details, assemblies, design layouts, equipment installations and related industrial practices.

MET 111 Applied Statics

Sem. 1 or 2, class 2, lab. 2, cr. 3. Prerequisite: MA 153, MET 162; Corequisite: MA 154.

Force systems, resultants and equilibrium, trusses, frames, beams, and shear and moments in beams are studied.

MET 141 Materials I

Sem. 1 or 2, class 2, lab. 2, cr. 3.

An overview of structures, properties, and applications of metals, polymers, ceramics, and composites commonly used in industry is presented. Problem solving skills are developed in the areas of materials selection, evaluation, measurement and testing.

MET 142 Manufacturing Processes I

Sem. 1 or 2, class 2, lab. 3, cr. 3. Prerequisite: MET 141.

Basic casting, forming and joining processes are surveyed. The course emphasizes the selection and application of various processes.

MET 162 Computational Analysis Tools in MET

Sem. 1 or 2, lab. 3, cr. 1. Credit will not be granted for both MET 162 and MET 160.

Instruction is given in analytical and computational problem-solving techniques. The electronic calculator, the factor label method of unit conversions, and engineering graphs are used to solve technical problems in Mechanical Engineering Technology.

MET 211 Applied Strength of Materials

Sem. 1, class 3, lab. 2, cr. 4. Prerequisite: MET 111; Corequisite: MA 223.

The principles of strength, stiffness and stability are introduced and applied primarily to mechanical components.

MET 213 Dynamics

Sem. 1, class 2, lab. 2, cr. 3. or class 3, cr. 3. Prerequisite: MET 111; Corequisite: MA 223.

Kinematics and kinetics principles of rigid-body dynamics are introduced. Emphasis is on the analysis of bodies in plane motion.

MET 214 Machine Elements

Sem. 2, class 3, cr. 3. Prerequisites: MET 211 and MET 213.

The methods developed in statics, dynamics and strength of materials are applied to the selection of basic machine components. The fundamental principles required for the selection of individual elements that compose a machine are developed. Selected course topics are included as computer exercises.

MET 220 Heat/Power

Sem. 2, class 3, cr. 3. Prerequisites: MET 162, PHYS 220; Corequisite: MA 223.

Heat/Power is an introduction to the principles of thermodynamics and heat transfer. Basic thermodynamic processes are used to evaluate the performance of energy-based systems such as internal com-

bustion engines, power plants and refrigeration equipment.

MET 230 Fluid Power

Sem. 1, class 2, lab. 2, cr. 3. Prerequisites: MET 111 or PHYS 220; Corequisite: MA 223.

This course consists of the study of compressible and incompressible fluid statics and dynamics as applied to hydraulic and pneumatic pumps, motors, transmissions, and controls.

MET 242 Manufacturing Processes II

Sem. 1, class 2, lab. 2, cr. 3. Prerequisites: MET 141, MA 151 or MA 154 or MET 162.

This course surveys the manufacturing processes and tools commonly used to convert cast, forged, molded and wrought materials into finished products. It includes the basic mechanisms of material removal, measurement, quality control, assembly processes, safety, process planning and automated manufacturing.

MET 299 Mechanical Engineering Technology

Sem. OC, cr. 1-3. Prerequisite: Mechanical Engineering Technology major.

Independent project or laboratory work is conducted under the supervision of appropriate MET faculty. Hours and subject matter must be arranged by instructor and approved by MET Curriculum Subcommittee.

MET 302 CAD in the Enterprise

Sem. 1 or 2, class 1, lab. 5, cr. 3. Prerequisite: MET 102, junior status or consent of instructor.

Theory and practice of management, use and integration of computer aided design systems, and related engineering tools and practices are studied as they are applied in the industrial enterprise. Emphasis using 3D parametric solid modeling techniques and practices.

MET 313 Applied Fluid Mechanics

Sem. 2, class 3, cr. 3. Prerequisites: MET 230 and MA 224.

The fundamental principles of fluid mechanics are developed, including properties of fluid, pressure, hydrostatics, dynamics of fluid flow, friction losses, and sizing of pipes. Emphasis is on problem solving.

MET 315 Applied Mechanism Kinematics & Dynamics

Sem. 1 or 2, class 2, lab. 2, cr. 3. Prerequisites: MET 213 and MET 214.

CAD software and graphical techniques are used to determine displacements, velocities, and accelerations in common mechanisms. Cam followers and basic motions; static and dynamic force analysis; static and dynamic shaft balancing; and relevant microcomputer software are also considered.

MET 320 Applied Thermodynamics

Sem. 1, class 3, cr. 3. Prerequisites: MET 220 and MA 223.

Following a review of fundamental concepts advanced power and refrigeration cycles are analyzed. Applications such as gas mixtures, air-vapor mixtures, and chemical reactions of combustion processes are presented.

MET 344 Materials II

Sem. 1, class 3, cr. 3. Prerequisites: MET 141, MET 211 and CHEM 111.

Metals and polymers are studied. Topics include the bonding of atoms; the structures of crystals and polymers; the coldworking, alloying, and heat treating of metals; and the physical behavior of plastics. Course emphasis is on the development and control of material properties to meet engineering requirements and specifications.

MET 382 Controls & Instrumentation for Automation

Sem. 1, class 2, lab. 2, cr. 3. Prerequisites: MA 223, CPT 175E and PHYS 221.

Study of the procedures and techniques essential to industrial measurement and transmission of data is provided in the areas of machine control, process control, and automated testing. Concepts of hysteresis, repeatability, weighted signals, span, suppression, range and closed loop control are emphasized.

MET 400 Mechanical Design

Sem. 2, class 2, lab. 2, cr. 3. Prerequisites: CPT 175E, MET 320 and MET 214.

Theory and practice in the process of mechanical design is presented. Cross-

disciplinary aspects, decision-making, group dynamics, customer focus, and other techniques and philosophies used in the industrial design process will be studied. Emphasis is on multiple open-ended projects.

MET 411 Introduction to the Finite Element Method

Sem. 1, class 2, lab. 2, cr. 3 or class 1, lab. 4, cr. 3. Prerequisites: MET 211, MET 213, PHYS 221 and MA 224.

The finite element method is introduced with emphasis on modeling and interpretation of results. Linear static problems are solved using commercial FEA software and FEA results are verified through laboratory tests and/or theoretical calculations. Topics include trusses, frames, plane stress/strain, torsion, 3D structures, buckling and natural frequency/mode shape analyses.

MET 451 Manufacturing Quality Control

Sem 1 and 2, class 3, cr. 3 or class 2, lab 2, cr. 3. Prerequisite: STAT 301. (Not open to students with credit in CIMT 451.

Quality control practices used in manufacturing industries, management, statistical control charts, reliability, sampling plans, economics, computer methods, and test equipment are presented and applied.

MET 485 Control Systems Components

Sem. 2, class 2, lab. 3, cr. 3. Prerequisite: MET 382 or permission of the instructor.

Process control components, process characteristics, control modes, and control systems will be discussed.

MET 499 Mechanical Engineering Technology

Sem. OC, cr. 1-3. Prerequisite: Mechanical Engineering Technology major.

Independent project or study of a special topic is conducted under the supervision of appropriate MET faculty. Hours and subject matter must be arranged with the instructor and approved by the MET curriculum subcommittee before enrolling in the course.

MUSIC

MUS 250 Music Appreciation

Sem. 1 and 2, class 2, cr. 3.

An introduction to the traditions, forms, and styles of classical music. Other types of music may be examined as well.

MUS 324 Teaching Music in the Elementary School

Sem. 1 and 2, class 3, cr. 3. Prerequisite: TE.

Develops basic musicianship through singing, playing instruments, reading and writing music, listening and moving to music. Surveys music teaching methods and materials. Includes lesson planning, experiences in teaching, and observation of children in music classes.

NURSING

NUR 118 Perspectives in Nursing

Sem. 1 and 2, class 1, cr. 1. Prerequisite: admission to nursing program.

Introduction to contemporary nursing practice through exploration of nursing's historical development, legal and ethical aspects of the nurse/client relationship, and practice of the nursing role.

NUR 119 Nursing Assessment

Sem. 1 and 2, class. 1, lab. 3, cr. 2. Prerequisite: admission to nursing program.

Assessment techniques to establish a client data base are demonstrated and practiced. Techniques of interviewing, inspection, auscultation and selected palpation are presented as the methods used to determine client health status.

NUR 123 Nursing Foundations

Sem. 1 and 2, class 2, lab. 6, cr. 4. Prerequisites or corequisites: NUR 118, NUR 119, BIOL 213, PCTX 201.

The nursing process is introduced and utilized as the framework for promotion of client health in the context of human needs maintenance/fulfillment. The concepts of holistic client care and adaptation along the health-illness continuum are emphasized. Laboratory experience is provided in campus laboratory and clinical settings.

NUR 125 Career Transition to Associate Degree Nursing

Sem. 1 and 2, class 3, cr. 3. Prerequisite: Admission to nursing program, active LPN licensure.

The differences between the LPN and ADN roles are discussed. The nursing process is utilized to establish plans of care and the teaching/learning process is employed to develop teaching plans for clients. The role components of the associate degree are explored.

NUR 208 Lifespan Human Development

Sem. 1 and 2, class 2, cr. 2. Prerequisite: admission to the nursing program or consent of instructor.

A study of the continuity of development throughout the lifespan to gain an understanding of the influences of heredity and environment on the individual. Nursing implications of developmental changes are identified.

NUR 214 Introduction to Pathophysiology

Sem. 1 and 2, class 3, cr. 3. Prerequisites: BIOL 213 and BIOL 214 or consent of instructor.

An introduction to pathophysiological alterations in major regulatory mechanisms of the body. Provides a foundation for understanding general nursing practice, various diagnostic procedures, and selected therapeutic regimens.

NUR 230 Personal Expression in Nursing

Sem. 1 and 2, class 1, cr. 1. Prerequisite: admission to nursing program.

Personal expression through verbal and nonverbal communications is explored. The process of communicating thoughts and information effectively is emphasized.

NUR 231 Nursing Care of Developing Families

Sem. 1 and 2, class 2, lab. 3, cr. 3. Prerequisites: NUR 118, NUR 119, NUR 123 and PCTX 201. Prerequisite or corequisite: NUR 208, BIOL 214.

The nursing process is utilized to assist individual members of childbearing and childrearing families toward the promotion of optimal health. Health promotion and protective measures related to child-

bearing, childrearing and family dynamics are emphasized. Clinical experiences are provided in a variety of settings.

NUR 232 Nursing Care of Infants, Children & Adolescents

Sem. 1 and 2, class 2, lab. 3, cr. 3. Prerequisites: NUR 118, NUR 119, NUR 123 and PCTX 201. Prerequisites or corequisites: NUR 208, NUR 214 and BIOL 221.

The nursing process is utilized to assist individual clients toward the promotion of optimal health during the periods of infancy, childhood, and adolescence. Health promotion and supportive measures are emphasized. Clinical experiences are provided in a variety of settings.

NUR 233 Nursing Care of Adults

Sem. 1 and 2, class 2, lab. 6, cr. 4. Prerequisites: NUR 118, NUR 119, NUR 123 and PCTX 201. Prerequisites or corequisites: NUR 214 and BIOL 221.

The nursing process is utilized to assist individual adult clients toward the promotion of optimal health. Health needs/problems of adulthood are emphasized. Experiences in a variety of clinical settings are provided.

NUR 234 Psychosocial Nursing Care

Sem. 1 and 2, class 2, lab. 6, cr. 4. Prerequisites: NUR 118, NUR 119, NUR 123, BIOL 213, BIOL 214 and PSY 120. Prerequisites or corequisites: NUR 230, NUR 231 and NUR 214.

The nursing process is utilized to assist family members experiencing dysfunctional interactions toward achievement of optimal health. Therapeutic modalities that reduce dysfunctional thoughts, feelings or behaviors are emphasized. Clinical experiences are provided in a variety of settings.

NUR 235 Nursing Issues

Sem. 1 and 2, class 1, cr. 1. Prerequisite: NUR 118.

Nursing, health care, and societal issues are explored. Legal and ethical problems confronting contemporary nursing practice are examined.

NUR 236 Transition to Nursing Practice

Sem. 1 and 2, class 1, cr. 1. Prerequisites: NUR 118 and NUR 230. Prerequisites or corequisites: NUR 235 and NUR 237.

The role transition from nursing student to graduate nurse is explored in relation to employment expectations and role responsibilities. Personal accountability as a practicing member within the discipline of nursing is emphasized.

NUR 237 Nursing Synthesis

Sem. 1 and 2, class 2, lab. 12, cr. 6. Prerequisites: NUR 214, NUR 230, NUR 233 and BIOL 221. Prerequisites or corequisites: NUR 231, NUR 232, NUR 234, NUR 235, NUR 236 and F&N 303.

Nursing process is utilized to assist clients toward the promotion of optimal health within their contextual environment. Nursing care and client care management of adults with complex health care needs/problems are emphasized. Clinical experiences are provided in a variety of settings.

NUR 355 Applied Thanatology

Sem. 1 and 2, class 3, cr. 3. Prerequisites: None

Exploration of the basic needs of the dying individual and the family. Identification of the appropriate and supportive nursing intervention within a social and cultural framework will enable students to better appreciate and apply various psychological therapeutic interventions for the client and the family resulting in better coping and/or adaptive behaviors within the system.

NUR 378 Growing Old in a New Age

Sem. 1 and 2, class 3, cr. 3. Prerequisites: None.

Concepts and issues of aging are explored to enhance the understanding of the impact of aging on society. The processes of aging and old age as stages of life are identified.

NUR 399 Special Assignments

Sem. 1 and 2, cr. 1-6.

Reading, discussion, written reports and practice in special areas of nursing.

ORGANIZATIONAL LEADERSHIP AND SUPERVISION

OLS 252 Human Behavior in Organizations

Sem. 1, 2 and 3, class 3, cr. 3.

A survey of the concepts which provide a foundation for the understanding of individual and group behavior in organizations of work, with special emphasis on typical interpersonal and leadership relationships.

OLS 274 Applied Leadership

Sem. 1, 2 and 3. Class 3, cr. 3.

An introduction to the function, structure, strategies and operation of organization and the fundamental concepts of leadership especially as they apply to leadership within business organizations.

OLS 331 Occupational Safety & Health

Sem. 1 or 2, class 3, cr. 3. Prerequisite: OLS 252 or OLS 274 or consent of instructor.

A presentation of those aspects of occupational safety and health which are most essential to the first-line supervisor. Emphasis is placed on developing an understanding of the economic, legal and social factors related to providing a safe and healthful working environment.

OLS 368 Legislation Affecting Industrial Relations

Sem. OC, class 3, cr. 3.

Wage contracts and payments, workmen's compensation and insurance, injunction, strikes and boycotts, and statutes affecting labor.

OLS 372 Staffing & Performance Appraisal

Sem. 1 or 2, class 3, cr. 3. Prerequisite: OLS 376 or consent of instructor.

An application-oriented simulation of a compensation and benefits program for a medium sized company. It includes the study of staffing and appraising employee performance.

OLS 375 Training Methods

Sem. 1 or 2, class 3, cr. 3. Prerequisites: OLS 252 and OLS 274.

Principles, practices and methods of staff training and career development. Emphasis is placed on the application of principles related to adult learning, instructional design, program development and evaluation, and learning technologies.

OLS 376 Human Resource Issues

Sem. 1 or 2, class 3, cr. 3. Prerequisites: OLS 252 and OLS 274 or consent of instructor.

Analysis and discussion of selected case problems concerning typical personnel situations which impact upon the supervisor. Emphasis directed toward development of student attitude, philosophy, analytical ability and problem-solving skills within the working environment.

OLS 378 Labor/Management Relations

Class 3, cr. 3. Prerequisite: OLS 252 or OLS 274. Previously OLS 240. (Not open to students with credit in OLS 240.)

An introduction to, and overview of, the fundamental concepts of labor relations, collective bargaining, and dispute resolution procedures. An international comparative analysis is used to assess some of the legal, economic, and political structures of labor relations.

OLS 384 Leadership Process

Sem. 1 or 2, class 3, cr. 3. Prerequisite: OLS 376.

An examination of a comprehensive model of the leader-influence process that describes both causes and effects of various leader behaviors. Includes discussions of what the model suggests managers should do to be effective leaders.

OLS 454 Gender & Diversity in Management

Sem. 1 or 2, class 3, cr. 3. Prerequisite: OLS 376.

Our contemporary workforce represents multiple differences, including for example, gender, race, culture, ethnicity, age, and physical/mental abilities. Following this broad-based perspective of diversity, this course will focus on using

knowledge of diversity to develop the leadership potential of individuals in organizations.

OLS 477 Conflict Management

Sem. 1 or 2, class 3, cr. 3. Prerequisites: OLS 376 and OLS 378.

A study of the alternative means of settling interpersonal, political, and personnel disputes between and among parties by methods generally outside the traditional court system. Students will investigate the theoretical and practical aspects of communication, negotiation, mediation, arbitration, and other third-party strategies to reach agreements.

OLS 484 Leadership Strategies for Quality & Productivity

Sem. 1 or 2, class 3, cr. 3. Prerequisite: OLS 376 or consent of instructor.

A study of how organizational leaders create an environment conducive to high levels of employee self-motivation, quality and productivity. Actual case situations used to illustrate the application of course content.

OLS 485 Leadership for Team Development

Sem. 1 or 2, class 3, cr. 3. Prerequisites: OLS 375 and OLS 376 or consent of instructor.

An in-depth study of groups and group processes in the work setting, with a view to understanding group functions (and potential dysfunctions) under varying task conditions. Especially emphasized will be the leadership of work groups for effective performance and maximum member satisfaction.

OLS 486 Leadership: Management of Change

Sem. 1 or 2, class 3, cr. 3. Prerequisite: OLS 376.

A literature-based study on the management of change with a special emphasis on the importance and use of human interaction skills in change management.

OLS 487 Leadership Philosophy

Sem. 1 or 2, class 3, cr. 3. Prerequisite: OLS 376. Open to seniors and graduate students only.

Review of current managerial education and development theories and practices; discussion of fundamental social, economic, and political changes affecting business and the work of managing; implications of these changes for individual manager development and growth.

**DUAL LEVEL
Undergraduate-Graduate
Courses**

OLS 590D Individual Research

Problems in Supervision & Personnel

Sem. OC, cr. 1-6. Consent of instructor and program coordinator.

Opportunity to study specific problems in the field of supervision and personnel under the guidance of a qualified faculty member within the department. Does not include thesis work.

OLS 590I Organizational Leadership Internship Program

Sem. OC, cr. 3. Consent of instructor and program coordinator.

Opportunity to apply the theories and practice the skills of Organizational Leadership in a working environment.

OLS 494 Organizational Policy

Class 3, cr. 3. Prerequisite: Open to Seniors only or with the consent of the instructor.

A senior level case-oriented course designed to provide the student with opportunities to evaluate various organizational policies and strategies and recommend improvements and/or enhancements for the organization's future. Taking this course will enable the student to utilize the knowledge attained in previous courses and recognize the interrelationships and understand leadership policies that guide an organization.

PHARMACY

PCTX 201 Introductory Pharmacology

Sem. 1 and 2, class 3, cr. 3. Prerequisites: Students must meet all qualifications for admission to the nursing program.

An introduction to the pharmacological basis of therapeutics for nursing students.

PHILOSOPHY

PHIL 110 Introduction to Philosophy

Sem. 1, class 3, cr. 3.

The basic problems and types of philosophy with special emphasis on the problems of knowledge and nature of reality.

PHIL 111 Ethics

Sem. 2, class 3, cr. 3.

A study of the nature of moral value and obligation. Topics such as the following will be considered: different conceptions of the good life and standards of right conduct; the regulation of non-moral and moral goodness; determinism, free will, and the problem of moral responsibility; the political and social dimensions of ethics; the principles and methods of moral judgment. Readings will be drawn both from contemporary sources and from the works of such philosophers as Plato, Aristotle, Aquinas, Butler, Hume, Kant, and J. S. Mill.

PHIL 221 Introduction to the Philosophy of Science

Sem. OC, class 3, cr. 3.

An investigation of the scope and methods of science, and its relation to society. Why — and whether — scientific methods should be so well regarded; whether legitimate moral/social/political objections can be raised against scientific theories or experiments.

PHIL 225 Philosophy of Women

Sem. 1 or 2, class 3, cr. 3.

A study of philosophical theories of women's nature and the moral and social implications of such theories.

PHIL 275 The Philosophy of Art

Sem. 1, class 3, cr. 3.

A survey of the principal theories concerning the nature, function and value of the arts from classical times to the present.

PHIL 293 Selected Topics in Philosophy

Sem. 1 or 2, cr. 1-3. (May be repeated for credit).

A critical examination of some special topic or topics in philosophy.

PHIL 330 Religions of the East

Sem. 1 and 2, class 3, cr. 3.

A study of the history, teachings, and present institutions of the religions of India, Southeast Asia, China, and Japan. This will include Hinduism, Jainism, Sikhism, Buddhism, Confucianism, Taoism, Shintoism, and Parsiismk.

PHIL 331 Religions of the West

Sem. OC, class 3, cr. 3.

A study of the origins and present institutions of Judaism, Christianity, and Islam. This will include a brief study of the influences upon Western religion of ancient Egypt, Mesopotamia, Greece, Rome, and Persia.

PHIL 493 Interdisciplinary Undergraduate Seminar (HIST 493, POL 493, PSY 493, SOC, 493, THTR 493)

Sem. 1 and 2, class 1-3, cr. 1-3. Prerequisite: Consent of instructor. May be repeated for credit.

An undergraduate seminar devoted to an interdisciplinary examination of social, economic, political, and intellectual movements, using faculty resources of the participating departments. Subject matter will vary. Each offering of the seminar will be approved by a committee of department heads from the sponsoring departments.

PHYSICAL EDUCATION, HEALTH, RECREATIONAL STUDIES

PE 322 Physical Education in the Elementary School

Sem. OC, class 2, lab 2, cr. 2. Prerequisite: Admsission to Teacher Education Program.

Current conceptions of elementary school physical education with a particular emphasis on curriculum implementation.

PHYSICS

PHYS 152 Mechanics

Sem. 2, class 4, lab 2, cr. 4. Prerequisite or corequisite: MA 162 or MA 162M or equivalent.

Statics; uniform and accelerated motion; Newton's laws; circular motion; energy, momentum, conservation principles; dy-

namics of rotation; gravitation and planetary motion; hydrostatics and hydrodynamics; simple harmonic motion; wave motion and sound.

PHYS 218 General Physics I.

Sem. 1 and 2, class 4, lab 2, cr. 4. Prerequisite: MA 153 and 154.

Mechanics, heat, and sound. Primarily for technology students.

PHYS 219 General Physics I

Sem. 2, class 4, lab 2, cr. 4. Prerequisite: PHYS 218.

Electricity, light, and modern physics. Primarily for technology students.

PHYS 220 General Physics I

Sem. 1, class 3, lab 2, cr. 4. Prerequisite: MA 153 and 154 or equivalent.

Mechanics, heat, and sound for students not specializing in physics.

PHYS 221 General Physics II

Sem. 2, class 3, lab 2, cr. 4. Prerequisite: PHYS 220.

Electromagnetism, light, and modern physics for students not specializing in physics.

PHYS 241 Electricity & Optics

Sem. OC, class 4, cr. 4. Prerequisite: PHYS 152.

Electrostatics, current electricity, electromagnetism, magnetic properties of matter. Electromagnetic waves, geometrical and physical optics.

PHYS 251 Heat, Electricity, & Optics

Sem. OC, class 5, lab 2, cr. 5. Prerequisite: PHYS 152.

Heat, kinetic theory, elementary thermodynamics, heat transfer. Electrostatics, current electricity, electromagnetism, magnetic properties of matter; geometrical and physical optics.

PHYS 261 Electricity & Optic

Sem. OC, class 5, cr. 4. Prerequisite or corequisite: MA 261.

Electricity and magnetism with emphasis on fields; geometrical and physical optics.

PHYS 270 Special Topics in Physics

Sem. OC, cr. 1-5. Admission by special permission of Physics faculty. May be repeated for credit.

Specialized topics in Physics.

PHYS 290 Special Assignments

Sem. OC, cr. 1-3. Prerequisite: Consent of instructor required. May be repeated for credit.

Reading, discussions, written reports, or laboratory work selected for enrichment in special areas of physics.

PHYS 290E Physics for Elementary Education Majors.

Sem. 1 and 2, class 0, lab 4, cr. 3. Not available for credit toward graduation in the School of Science.

Development of basic concepts and theories in physical science.

PHYS 342 Modern Physics

Sem. OC, class 3, cr. 3. Prerequisite: PHYS 241, 251 or 261.

A survey of basic concepts and phenomena in atomic, nuclear, and solid-state physics.

PHYS 342L Modern Physics Laboratory

Sem. OC, lab 2, cr. 1.

Laboratory experiments to accompany PHYS 342.

POLITICAL SCIENCE

POL 101 American Government & Politics

Sem. 1, 2 and Summer, class 3, cr. 3.

A study of the nature of democratic government, the U.S. Constitution, federalism, civil rights, political dynamics, the presidency, Congress, and the judiciary.

POL 120 Introduction to Public Policy & Public Administration

Sem. OC, SS, class 3, cr. 3.

An introduction to the fields of public policy and public administration. Processes of policy formation and administration are examined. Different approaches to evaluating and improving public policies are discussed.

POL 130 Introduction to International Relations*Sem. OC, class 3, cr. 3.*

An analysis of the fundamentals of international law, organization, and politics particularly as relevant to contemporary international relations.

POL 141 Governments of the World*Sem. 1 or 2, class 3, cr. 3.*

An introduction to the politics and government in selected foreign countries. The course presents the tools and background needed to understand contemporary events in the world beyond the U.S. readings and discussions pay special attention to democratization and development.

POL 372 Indiana Government & Politics*Sem. OC, SS, class 3, cr. 3.*

This course analyzes the role of political parties, issues, candidates, media, funding, and electoral and campaign strategies in presidential, congressional, and state campaigns. Contemporary election examples will be utilized.

PSYCHOLOGICAL SCIENCES**PSY 120 Elementary Psychology***Sem. 1, 2 and 3. Class 3, cr. 3.*

Introduction to the fundamental principles of psychology, covering particularly the topics of personality, intelligence, emotion, abnormal behavior, attention, perception, learning, memory, and thinking.

PSY 200 Introduction to Cognitive Psychology*Sem. OC, class 3, cr. 3.*

A survey of psychology as the science of mental life, covering theoretical interpretation of experimental research on perception, reading, attention, consciousness, imagery, memory and its improvement, high-speed memory scanning, psycholinguistics, and problem solving.

PSY 201 Introduction to Quantitative Topics in Psychology

Sem. 2, class 3, cr. 3 or class 2, lab. 2, cr. 3. Prerequisites: PSY 120 and MA 153 or placement at a higher level of mathematics.

An introduction to the development and application of statistical, quantitative, and measurement techniques pertinent to the psychological sciences. Fundamental concepts of numerical assignment, sampling theory, distribution functions, experimental design, inferential procedures, and statistical control.

PSY 203 Introduction to Research Methods in Psychology*Sem. 1 or 2, class 2, lab. 2, cr. 3.*

The use of scientific method in psychology. Lecture covers principles of collecting and interpreting data, using examples of research from many areas of psychology. In the laboratory portion, the student uses many different techniques from various areas of psychology.

PSY 235 Child Psychology*Sem. 3, class 3, cr. 3.*

General principles of children's behavior and development, from conception to adolescence, including sensory and motor development, and basic psychological processes such as learning, motivation, and socialization.

PSY 236 Issues in Developmental Psychology

Sem. 3, class 3, cr. 3. Prerequisite: PSY 120 or PSY 235 or CDFS 210 or consent of instructor.

Survey of current issues in developmental psychology and methods for studying these problems. The topics selected for intensive examination reflect contemporary developmental research issues and may involve different-aged children of adults.

PSY 239 Women: A Psychological Perspective

Sem. 1 or 2, class 3, cr. 3. Prerequisite: PSY 120 or consent of instructor.

The purpose of the course is to provide an overview of the psychology of women. Topics include stereotyping, women and achievement, aggression and power, the psychological concept of androgyny, and attitudes toward feminism.

PSY 240 Introduction to Social Psychology

Sem. 1 or 2, class 3, cr. 3. Prerequisite: PSY 120. Not open to students with credit for SOC 340.

A broad survey of current knowledge about human social behavior. Topics covered include aggression, attraction and love, social influence, attitudes and attitude change, nonverbal communication, leadership, prejudice and discrimination, and application of social psychology to law, medicine, and other fields.

PSY 242 Introduction to Psychology of Personality

Sem. OC, class 3, cr. 3. Prerequisite: PSY 120.

Broad survey of current knowledge about human personality. Several personality characteristics will be covered, including self-esteem, need for achievement, focus of control, authoritarianism, and androgyny. The assessment of personality to social behavior will be discussed.

PSY 250 Psychology of Adjustment

Sem. 1 and 2, class 3, cr. 3.

A survey of principles of human adjustment with emphasis on integration of self, perception, control, behavior, and relationships. Solutions to selected problems and anxieties are discussed to illustrate effecting change, building, emotional stability, and preventing maladjustment.

PSY 251 Health Psychology

Sem. 1 or 2, class 3, cr. 3.

Health psychology is concerned with the interaction between behavior and health and illness. It includes the psychological study of the relationship between health and lifestyle, stress and coping, and health-injurious behaviors.

PSY 311 Human Learning & Memory

Sem. OC, class 3, cr. 3. Prerequisite: PSY 201 or consent of instructor.

Theory and research in verbal learning, attention, discrimination learning, thinking, conceptual and organization processes, memory and languages.

PSY 350 Abnormal Psychology

Sem. 1 and 2, class 3, cr. 3. Prerequisite: 3 credit hours of psychology.

Various forms of mental disorder from the standpoint of their origin, treatment, prevention, social significance, and relation to problems of normal human adjustment.

PSY 360 Developmental Psychology

Sem. 1 or 2, class 3, cr. 3.

An examination of behavioral ontogeny, difference and similarities arising out of successive transactions of organism with environment over time. Specification of processes and outcomes from conception through maturity.

PSY 361 Human Development I: Infancy & Childhood

Sem. OC, class 3, cr. 3. Prerequisite: PSY 120 or equivalent or consent of instructor.

A consideration of the formative years in human development with primary attention given to the processes of socialization, individualization, and adaptation, initiated by retrospective self-examination and furthered by an analysis of systematic life history data.

PSY 365 Development of Gender Roles in Children

Sem. 1 or 2, class 3, cr. 3. Prerequisite: One course in psychology.

Considers basic concepts and the varying theoretical interpretations for the development of gender roles with special attention given to recent empirical findings with children. Measures used in this area will be demonstrated in class and critically evaluated.

PSY 372 Psychological Foundations of Work Behavior: Introduction to Industrial/Organizational Psychology

Sem. OC, class 3, cr. 3.

Survey of psychological principles and research methods relevant to organizations and industry. Topics covered include motivation, communication, leadership, conflict, and organizational effectiveness. Also covered are personal selection, the work situation, human errors, and accidents.

PSY 380 Behavior Change Methods

Sem. 1 or 2, class 3, cr. 3. Prerequisite: Junior standing.

Application of behavioral learning principles to problems in living. Self-paced learning format covers design and evaluation of behavior modification programs, with practical and ethical issues. Relevant to work with children, adults, clinical patients, athletes, etc., in schools, institutions, and everyday situations.

PSY 391 Readings in Psychology

Sem. OC, cr. 1-3. Prerequisite: Consent of instructor.

In-depth reading on specific topic area in psychology under the guidance of a faculty member. Repeatable for grade up to 6 credit hour maximum; additional credit on Pass/Not Pass basis only.

PSY 392 Special Topics in Psychology

Sem. OC, SS, cr. 1-3. May be repeated for credit.

Various topics which may change from semester to semester are presented by Psychological Sciences faculty.

PSY 420 Introduction to Personality Theory

Sem. OC, class 3, cr. 3. Prerequisite: 6 credits in psychology.

Personality theories selected from the traditions of psychoanalysis, behaviorism, and phenomenology-existentialism are presented and contrasted in the fundamental assumptions of each outlook. Theorists: Freud, Adler, Jung, Dollard and Miller, Skinner, Bandura, Rogers, Boss, Binswanger, and Kelly.

PSY 428 Drugs & Behavior

Sem. 1 or 2, class 3, cr. 3. Prerequisite: Junior standing and six credits of psychology.

Discussion of the variety of drugs which affect the nervous system and behavior. Emphasis will be upon a discussion of the physiological and pharmacological bases for the use and misuse of drugs in our society.

PSY 450 Crisis Intervention

Sem. 1, class 3, cr. 3.

Major life crises in areas such as death, suicide, substance abuse, loneliness, sexuality, marital and family relationships, and situational loss are analyzed by means of crisis theory and crisis intervention approaches. Both individual and societal responses are considered primarily from a nonpathological viewpoint.

PSY 498 Senior Research

Sem. 1 or 2, cr. 3. Open to senior undergraduate majors in psychology (May be repeated for credit)

Student conducts and writes an individual research project under the guidance of a member of the staff.

DUAL LEVEL**Undergraduate-Graduate Course****PSY 500 Statistical Methods Applied to Psychology, Education & Sociology**

Sem. OC, class 3, cr. 3.

Descriptive statistics and an introduction to sampling statistics. Application to psychological, sociological, and educational data.

PSY 591 Topics in Psychology

Sem. OC, class 1-3, cr. 1-3. May be repeated for credit.

Various topics that may change from semester to semester are presented by faculty in the Department of Psychological Sciences. (Each semester must be approved by the Graduate Committee before it is listed; each title may be offered only twice.)

SOCIAL WORK**SWRK 261 Introduction to Social Work**

Sem. 1, class 3, cr. 3.

Overview of social work profession and practice. Survey of substantive fields of social work and consideration of relevant attitudes, values, ethics. Prerequisite for entry into social work concentration.

SWRK 361 Institution of Social Welfare
Sem. 2, class 3, cr. 3. Prerequisite: SOC 100, 312 or equivalent.

Examination of philosophical, historical, political, economic and social trends contributing to the development of social welfare. Current policy and practice issues of social work at micro and macro levels. For students contemplating social work as a career.

SWRK 362 Social Work Practice I

Sem. 1, class 3, cr. 3.

An upper-level, experientially based course in basic skill needed for facilitating creative problem exploration in helping relationships. Emphasis on interviewing techniques, values clarification, and examination of one's interpersonal style. Content directed at professional practice rather than personal growth.

SWRK 363 Social Work Practice II

Sem. 2, class 3, cr. 3. Prerequisite: SWRK 362.

A continuation of SWRK 362. More intensive work on facilitative problem exploration. Emphasis placed on action skills, creativity in interpersonal problem solving, and advocacy skills. Content directed at generic skills necessary for generalist social work practice.

SWRK 461 Field Practicum in Social Work

Sem. 1 and 2, class 3, cr. 3.

To be arranged by instructor.

SOCIOLOGY

SOC 100 Introductory Sociology

Sem. 1, 2 and 3. Class 3, cr. 3.

A survey course designed to introduce the student to the scene of human society. Fundamental concepts, description and analysis of society, culture, the socialization process, social institutions, and social change.

SOC 220 Social Problems

Sem. 1 or 2, class 3, cr. 3. Prerequisite: SOC 100, SOC 312 or equivalent.

Contemporary problems at the community, society, and international levels, focusing on patterns of social organiza-

tion and social change in American society, with concentration on such topics as technological militarism and war, poverty, racism, political protest, and cybernation.

SOC 310 Racial & Ethnic Diversity

Sem. 1, class 3, cr. 3. Prerequisite: SOC 100, SOC 312 or equivalent.

Examines racial and ethnic pluralism in America: ways groups have entered our society; their social and cultural characteristics; and their relationships with other groups. Groups include the English, Germans, Irish, Jewish, Chinese, Japanese, Blacks, Hispanics, and Native Americans.

SOC 324 Criminology

Sem. 2, class 3, cr. 3. Prerequisite: SOC 100, SOC 312 or equivalent.

Nature and cause of crime; methods of dealing with adult and juvenile offenders; consideration of present programs for the social treatment of crime in the light of needed changes.

SOC 340 General Social Psychology

Sem. 1 or 2, class 3, cr. 3. Not open to students with credit in PSY 240. Prerequisite: Three hours of psychology or sociology.

Social influences on the individual and processes of social interaction. Individual attitudes and behavior as related to socialization, social norms, social roles, communication and propaganda, and other social influences. Among the interaction processes considered are interpersonal attraction, influence, leadership, cooperation, and conflict.

SOC 350 Social Psychology of Marriage

Sem. OC, class 3, cr. 3. Prerequisite: 3 credit hours of social science and/or consent of instructor.

Designed to provide an understanding of contemporary courtship, marriage, and family interaction as cultural, social, and social psychological phenomena. Consideration of the major sources of marital strain and conflict within a heterogeneous, rapidly changing society.

SOC 382 Introduction to Methods of Social Research

Sem. OC, class 3, cr. 3. Prerequisite: SOC 382.

Introduction to the methods of data collection and analysis and to the use of the scientific method of social research. Formulation of hypotheses and research designs for their testing. Elementary principles for the conduct of experiments, observation and interviewing, documentation, content analysis, and surveys. Relationship between social research and social theory.

SOC 383 Introduction to Methods of Social Research II

Sem. OC, Class 3, cr. 3. Prerequisite: SOC 382

Introduction to the methods of data collection and analysis and to the use of the scientific method of social research. Formulation of hypotheses and research designs for their testing. Elementary principles for the conduct of experiments, observation and interviewing, documentation, content analysis, and surveys. Relationship between social research and social theory.

SOC 391 Selected Topics in Sociology

Sem. 1 and 2, class 1-3, cr. 1-3. Prerequisite: SOC 100, 312, or equivalent. (May be repeated for credit up to six hours).

Various topics in sociology that may change from semester to semester are presented by Sociology faculty members.

SOC 411 Social Stratification

Sem. 2, class 3, cr. 3. Prerequisite: SOC 100, 312, or equivalent.

Examination of systems of class and caste, with special attention to the United States; status, occupation, income, and other elements of stratification.

SOC 421 Juvenile Delinquency

Sem. 2, class 3, cr. 3. Prerequisite: SOC 100, SOC 312 or equivalent.

A study of social and psychological factors influencing individual delinquent behavior patterns. Emphasis on preventive and rehabilitative programs and the role of community agencies, such as social service agencies, juvenile courts, and youth authorities.

SOC 493 Interdisciplinary Undergraduate Seminar (IDIS 372, PHIL 493, PSY 493, THTR 493)

Sem. 1 or 2, class 1-3, cr. 1-3. Prerequisite: consent of instructor. (May be repeated for credit.)

An undergraduate seminar devoted to an interdisciplinary examination of social, economic, political and intellectual movements, using the faculty resources of the participating departments. Subject matter will vary. Each offering of the seminar will be approved by a committee of department heads from the sponsoring departments.

DUAL LEVEL Undergraduate-Graduate Courses

SOC 574 Medical Sociology

Sem. OC, class 3, cr. 3. Prerequisite: SOC 100, SOC 312 or equivalent.

Examination of the basic points of view and a review of the accumulated body of knowledge specific to gerontology. Consideration of problems of population change, housing, social adjustment, retirement, mobility, family living arrangements, and finances of older people in the United States. Comparison with other countries.

SOC 590 Individual Research Problems

Sem. OC, cr. 1-3. Prerequisite: Consent of instructor. May be repeated for credit. Individual research on reading in an area of sociology under a sociology department staff member. Does not include thesis work.

SPANISH**SPAN 101 Spanish Level I**

Sem. 1 and 2, class 3, lab. 1, cr. 3. Prerequisite: Consent of the department head. Reserved exclusively for beginners and/or students who have had less than two years of high school Spanish, grade 9 or above.

Introduction to the basic structure and use of Spanish. A beginning course in which a certain number of basic rules and idiomatic constructions are covered with illustrations of their application through

simple graduated textbook readings. Each lesson concentrates on specific rules and constructions with the objective of understanding through reading and use of the language through oral exercises. Main objective: supply the students with tools to communicate in Spanish at a basic level.

SPAN 102 Spanish Level II

Sem. 1 and 2, class 3, lab. 1, cr. 3. Prerequisite: SPAN 101.

Continuation of Spanish 101. Completes the introduction to the basic grammar of Spanish with increased sophistication of insights into and idiomatic uses of language in general and the importance of precise use of language. Reading with understanding and oral practice. Main objective to enable students to communicate at a basic-intermediate level.

SPAN 103 Review of Spanish Levels I & II

Sem. 3, class 3, lab. 1, cr. 3. Prerequisite: Two or more years of high school Spanish, grades 9 through 12.

Required beginning course for students with at least two years of high school Spanish who fail to place into SPAN 201 or higher. Students passing SPAN 103 also earn 3 additional hours of departmental credit (without grade) for SPAN 101.

SPAN 112 Elementary Spanish Conversation I

Sem. OC, class 1, cr. 1. Prerequisite: SPAN 101. May be taken concurrently with SPAN 102.

Development of oral skills for self-expression. Guided practice in conversation to enhance communicative competence. Small group (enrollment limited to 10 per section) discussions in Spanish on practical topics.

SPAN 201 Spanish Level III

Sem. 1 and 2, class 3, cr. 3. Prerequisite: SPAN 102.

Continuation of SPAN 102. Emphasis on reading with understanding, moderate creative writing, and capability to communicate in Spanish at an intermediate level (simple face-to-face conversation, capability to formulate questions and satisfy basic survival needs).

SPAN 202 Spanish Level IV

Sem. 1 and 2, class 3, cr. 3. Prerequisite: SPAN 201.

Continuation of Spanish 201. Practice in composition and conversation at an intermediate-high level.

SPAN 211 Elementary Spanish Conversation II

Sem. OC, class 1, cr. 1. Prerequisite: SPAN 112. May be taken concurrently with SPAN 201.

Continuation of Spanish 112.

SPAN 212 Elementary Spanish Conversation III

Sem. OC, class 1, cr. 1. Prerequisite: SPAN 211. May be taken concurrently with SPAN 202.

Continuation of Spanish 211.

SPAN 235 Latin American Literature in Translation

Sem. 1 and 2, class 3, cr. 3. This course is taught in English.

Reading and discussion of selected masterpieces of Spanish American literature. The course context will change from semester to semester. Knowledge of Spanish is not required.

SPAN 335 The Literature of the Spanish Speaking Peoples in the United States

Sem. 1 and 2, class 3, cr. 3.

Study of selected poetry, fiction, theatre, and essays written in English by Spanish-speaking writers in the United States; conducted in English.

DUAL LEVEL

Undergraduate-Graduate Course

SPAN 590 Directed Reading in Spanish

Sem. 1 or 2, cr. 1-4.

Admission by consent of chairperson for Spanish. May be repeated for credit.

STATISTICS

STAT 113 Statistics & Society

Sem. 1 and 2, class 3, cr. 3. Not available for credit toward graduation in the School of Science.

An introduction to statistical ideas intended for students in non-science majors. Sampling, design of experiments, descriptive statistics, correlation and regression, probability and tests of significance are covered. A major effort is made in this course to explain statistics in everyday language. Applications are given in education, medicine, genetics and other fields.

STAT 213 Probability & Decision Theory

Sem. 1 and 2, class 3, cr. 3. Prerequisite: MA 152, 153 or equivalent. Not available for credit toward graduation in the School of Science.

An introduction to finite mathematics intended for students in the managerial, life and social sciences who possess the prerequisite knowledge in elementary algebra. Linear functions, matrices, linear programming, probability, probability distributions, finance, Markov chains, and theory of games are covered. This course is available as an Internet course.

STAT 225 Introduction to Probability Models

Sem. OC, class 3, cr. 3. Prerequisite: MA 224 or equivalent.

An introduction to probability intended for students who possess the prerequisite knowledge in calculus. Combinatorial analysis, axioms of probability, conditional probability and independence, random variables, expectation and limit theorems are covered.

STAT 301 Elementary Statistical Methods

Sem. 1, 2, and 3. Class 3, cr. 3. Prerequisite: MA 152, 153 or equivalent. Not open to students in the Division of Mathematical Science and Schools of Engineering. Intended for students with prerequisite knowledge in algebra. Credit not allowed in more than one of STAT 301, 350, 501, 503 and 511.

An introduction to statistics intended for students in non-science majors who possess the prerequisite knowledge in algebra.

Descriptive statistics, probability, probability distributions, sampling distributions, estimation, hypothesis testing, simple linear regression and analysis of variance are covered. This course is available as an Internet course.

STAT 350 Introduction to Statistics.

Sem. OC, class 3, cr. 3. Prerequisite: MA 162 or equivalent. Intended primarily for students majoring in the mathematics and statistics. Credit not allowed in more than one of STAT 301, 350, 501, 503 and 511.

An introduction to statistics intended for students in mathematical sciences or engineering majors who possess the prerequisite knowledge in calculus. Descriptive statistics, probability, probability distributions, sampling distributions, estimation, hypothesis testing, simple linear regression and analysis of variance are covered. Statistical computer programs such as SAS are used.

STAT 501 Experimental Statistics I

Sem. OC, class 3, cr. 3. Prerequisite: MA 152, 153 or equivalent. Primarily for Education, Social and Behavioral Sciences students. Not open to students in mathematical sciences or engineering. Credit not allowed in more than one of STAT 301, 350, 501, 503, or 511.

An introduction to statistics intended for students in education, social and behavioral sciences majors who possess the prerequisite knowledge in algebra.

Descriptive statistics, probability, probability distributions, sampling distributions, estimation, hypothesis testing, simple linear regression and analysis of variance are covered. Statistical computer programs such as SAS are used.

STAT 502 Experimental Statistics II

Sem. OC, class 3, cr. 3. Prerequisite: STAT 501 or equivalent. Not open to students in mathematical sciences or engineering.

Applied linear statistical models intended for students in education, social and behavioral sciences majors as a follow up course to STAT 501. Multiple linear regression, analysis of variance and design of experiments are covered. Statistical computer programs such as SAS are used.

STAT 503 Statistical Methods for Biology

Sem. 1, class 3, cr. 3. Prerequisite or corequisite: One semester of Calculus. Open only to majors related to the life sciences. Credit not allowed in more than one of STAT 301, 350, 501, 503, or 511.

An introduction to statistics intended for students in life sciences who possess the prerequisite knowledge in calculus. Descriptive statistics, probability, probability distributions, sampling distributions, estimation, hypothesis testing, simple linear regression and analysis of variance are covered. Statistical computer programs such as SAS are used.

STAT 511 Statistical Methods

Sem. OC, class 3, cr. 3. Prerequisite MA 162 or equivalent. Credit not allowed in more than one of STAT 301, 350, 501, 503, or 511.

An introduction to statistics intended for students in life sciences who possess the prerequisite knowledge in calculus. Descriptive statistics, probability, probability distributions, sampling distributions, estimation, hypothesis testing, simple linear regression and analysis of variance are covered. Statistical computer programs such as SAS are used.

STAT 512 Applied Regression Analysis

Sem. OC, class 3, cr. 3. Prerequisite: STAT 350, 503, 511 or equivalent post-calculus statistics.

Simple linear regression: inference, diagnostics and remedial measures; multiple linear regression: predictor selection, diagnostics and remedial measures, qualitative predictors; nonlinear regression: logistic, Poisson, generalized linear models; correlation analysis. Statistical computer programs such as SAS are used.

STAT 513 Statistical Quality Control

Sem. OC, class 3, cr. 3. Prerequisite: STAT 350, 503, 511 or equivalent post-calculus statistics.

Modeling process quality, control charts for variables and attributes, cumulative sum and exponentially weighted moving average and other univariate control

charts, factorial experiments for process design and improvement, lot-by-lot and other acceptance sample techniques are covered. Statistical computer programs such as SAS are used.

STAT 514 Design of Experiments

Sem. OC, class 3, cr. 3. Prerequisite: STAT 512.

Single-factor analysis of variance (ANOVA): diagnostics and remedial measures; multifactor ANOVA: equal and unequal sample sizes, random and mixed effects, analysis of covariance; randomized block designs, nested designs, repeated measures, latin square and response surface methodology are covered. Statistical computer programs such as SAS are used.

STAT 515 Statistical Consulting Problems

Sem. OC, class 0, cr. 1 - 3. Prerequisite: MA 261 or equivalent. Admission by consent of instructor. May be repeated for up to seven credits.

An introduction to statistical consulting intended for students who possess the prerequisite knowledge in calculus. The student participates with a member or members of the Mathematics, Statistics and Physics faculty to investigate and report on a statistical consultation problem for an observed study or a designed experiment or sample, for instance. Statistical computer programs such as SAS are used.

STAT 516 Basic Probability and Applications.

Sem. OC, class 3, cr. 3. Prerequisite: MA 261 or equivalent.

A thorough introduction to probability intended for students in mathematics, statistics or actuarial science who possess the prerequisite knowledge in calculus. Combinatorial analysis, axioms of probability, conditional probability and independence, random variables, expectation and limit theorems are covered.

STAT 517 Statistical Inference

Sem. OC, class 3, cr. 3. Prerequisite: STAT 516 or equivalent.

An introduction to statistical theory intended for students in mathematics, statistics or actuarial science who possess the prerequisite knowledge in probability. Estimation including unbiased, maximum likelihood and moment estimation; testing hypotheses for standard distributions and contingency tables; confidence intervals and regions; introduction to non-parametric tests and linear regression.

STAT 520 Time Series & Applications

Sem. OC, class 3, cr. 3. Prerequisite: STAT 516 or equivalent.

A first course in stationary time series intended for students in engineering, economics or the physical sciences who possess the prerequisite knowledge in probability. Stationarity, auto-covariance function and spectrum; integral representation of a stationary time series and interpretation; linear filtering, transfer functions; estimation of spectrum; multivariate time series are covered. Statistical computer programs such as SAS are used.

STAT 522 Sampling & Survey Techniques

Sem. OC, class 3, cr. 3. Prerequisite: STAT 512 or equivalent.

A course in sampling and survey techniques intended for students in education, social or the behavioral sciences that possess the prerequisite knowledge in applied regression analysis. Survey designs; simple random, stratified, and systematic samples; systems of sampling; methods of estimation; costs are covered.

STAT 524 Applied Multivariate Analysis

Sem. OC, class 3, cr. 3. Prerequisite: STAT 512 or equivalent, or consent of instructor.

A course in applied multivariate analysis intended for students in engineering, economics or the physical sciences who possess the prerequisite knowledge in applied regression analysis. Extension of univariate tests in normal populations to

the multivariate case, equality of covariance matrices, multivariate analysis of variance, discriminant analysis and misclassification errors, canonical correlation, principal components, and factor analysis are covered. Statistical computer programs such as SAS are used.

STAT 597 Statistical Consulting Seminar

Sem. OC, class 0, cr. 1 - 2. Prerequisite: STAT 512 or equivalent, and consent of instructor. This course may be repeated for credit, but at most three credits may count toward fulfilling the requirements for any degree.

A weekly statistical consulting seminar intended for students who possess the prerequisite knowledge in applied regression analysis. The student actively participates in weekly meetings on statistical consulting problems, and is given directed reading assignments in the statistical literature, as well as report-writing assignments. Statistical computer programs such as SAS may be used.

STAT 598 Topics in Statistical Methods

Sem. OC, class 0, cr. 1 - 3. Prerequisite: Consent of instructor. May be repeated for credit.

The student engages in individual directed reading assignments as well as report-writing assignments on approved topics. Statistical computer programs such as SAS may be used.

THEATRE**THTR 136 Rehearsal & Performance I**

Sem. 1, lab. 6, cr. 2. Maximum number of credits for any combination of THTR 136, 168, 336 and 368 is 8.

Study and practice of rehearsal techniques and stage performance. All students will audition for the current production. If cast, credit will be earned primarily through participation as an actor/actress. If not cast, credit will be earned through various technical or managerial tasks related to production.

THTR 168 Theatre Production I

Sem. 1, lab. 6, cr. 2. Maximum number of credits for any combination of THTR 136, 168, 336 and 368 is 8.

The study and application of theatre practices. All students will audition for the current production. If cast, credit will be earned primarily through participation as an actor/actress. If not cast, credit will be earned through various technical or managerial tasks related to production.

THTR 201 Theatre Appreciation

Sem. 2, class 3, cr. 3.

Understanding and appreciation of the theatre's role in the modern world, theatre's past contributions and history (overview), dramatic structure and analysis through required viewing and reading, and the contributions of the actor, director, designer and critic.

THTR 336 Rehearsal & Performance II

Sem. 1, lab. 6, cr. 2. Maximum number of credits for any combination of THTR 136, 168, 336 and 368 is 8.

Study and practice of rehearsal techniques and stage performance. All students will audition for the current production. If cast, credit will be earned primarily through participation as an actor/actress. If not cast, credit will be earned through various technical or managerial tasks related to production. Leadership positions will be assigned.

THTR 368 Theatre Production II

Sem. 1, lab. 6, cr. 2. Maximum number of credits for any combination of THTR 136, 168, 336 and 368 is 8.

The study and application of theatre practices. All students will audition for the current production. If cast, credit will be earned primarily through participation as an actor/actress. If not cast, credit will be earned through various technical or managerial tasks related to production. Leadership positions will be assigned.

THTR 390 Directed Study of Special Theatre Problems

Sem. OC, cr. 1-3. Prerequisite: Consent of instructor (May be repeated for a maximum of 6 hours of credit.)

An undergraduate level, individualized and intensive study of any aspect of theatre required by the student's plan of study.

THTR 390M The American Musical Theatre

Sem. 3O, class 3, cr. 3.

This course will provide a study of the history and development of the musical stage in America from the colonial period to the present. A study of scripts and listening to and viewing musical selections will be a featured part of this course.

THTR 590 Directed Study of Special Theatre Problems

Sem. OC, cr. 1-3. Prerequisite: Consent of instructor (May be repeated for a maximum of 6 hours of credit.)

An individualized and intense study of any aspect of theatre required by the student's plan of study.

FACULTY

DALE W. ALSPAUGH (1957-58, 1959)

Chancellor Emeritus

M.E., Cincinnati, 1955; M.S. Purdue, 1958; Ph.D., 1965; Professional Engineer, Ohio.

JOSEPH E. ANDERSON (1968-74; 1984-97)

Professor Emeritus of Mechanical Engineering Technology

A.A., Chicago City College, 1957; B.S.M.E., Valparaiso, 1959; M.S., DePaul, 1964; Registered Professional Engineer, Illinois Indiana California.

GEORGE T. ASTERIADIS, JR. (1971)

Assistant Vice Chancellor for Academic Affairs; Professor of Biology

B.S., State University of New York (Oswego), 1966; Ph.D., Purdue, 1971.

MARILYN J. ASTERIADIS (1972)

Associate Professor of Nursing

B.S.N., Dayton, 1962; M.S.Ed., Indiana, 1972; M.S.N., Indiana, 1983; R.N.

PATRICIA A. BABCOCK (1976-2001)

Professor Emerita of Nursing

B.S.N., Ball State, 1957; M.A., 1975; Ed.D., 1980; M.A., 1986; R.N.

VICTORIA J. BARCLAY (2002)

Assistant Professor of Social Work

B.S., Houghton College, 1974; M.A., Houston, 1981; Ph.D., Illinois, 1998.

REYNALDO D. BARRETO (1992)

Associate Professor of Chemistry

B.S., South Florida, 1981; Ph.D., Notre Dame, 1988.

L. EDWARD BEDNAR (1965)

Vice Chancellor for Academic Affairs; Professor of General Studies

A.A.S., Thornton Community College, 1959; B.S.Ed., Western Illinois, 1963; M.S., Northern Illinois, 1965; Ed.D., Western Michigan, 1982.

DEREK R. BJONBACK (2002)

Assistant Professor of Business

B.A., Simon Fraser (Canada), 1969; M.A., Simon Fraser, 1972; Ph.D., Colorado State, 1984; M.B.A., Notre Dame, 1999.

JAMES R. BLACKWELL (1965-89)

Professor Emeritus of Supervision

B.S. Purdue, 1941; M.A. Louisville, 1953; M.B.A. George Washington, 1964.

L. ROSS BLYTHE (1968-96)

Professor Emeritus of Education

B.A., Wheaton, 1956; M.S. Purdue, 1966; Ph.D., 1971.

EDNA KAREN BOONE (2002)

Visiting Professor of Chemistry

B.A., Fisk University, 1979; M.A., Fisk University, 1981; Ph.D., Georgia Institute of Technology, 2001.

ANITA O. BOWSER (1956-91)

Professor Emerita of Political Science

A.B., Kent State, 1945; LL.B., William McKinley School of Law, 1949; M.A., Purdue, 1967; M.S., Notre Dame, 1972; Ph.D., 1976.

THOMAS F. BRADY (1975)

Associate Professor of Organizational Leadership and Supervision

B.S., Indiana, 1958; M.B.A., Chicago, 1971.

THOMAS F. BRADY III (1998)

Associate Professor of Industrial Engineering Technology

B.S., Purdue, 1981; M.S., 1991, Ph.D., 1996.

TANTATAPE BRAHMASRENE (1988)

Associate Professor of Economics

B.S., Kasetsart University (Thailand), 1977; M.S., Indiana State, 1979; M.A., Cincinnati, 1981; Ph.D., 1986; CFP, 1991; ChFC, 1992.

WILFRED G. BRILL (1964-1998)

Professor Emeritus of Physics

B.A., Manchester, 1952; M.S. Purdue, 1955; Ph.D., 1964.

ARNOLD E. BROWN (1987)

Associate Professor of Organizational Leadership and Supervision

A.B., Michigan, 1955; B.S., 1958; M.B.A., Texas Christian, 1964.

EDWIN F. BUCK JR. (1966-90)

Professor Emeritus of Communication
B.A., Emanuel Missionary, 1944; M.A.,
Andrews, 1964; Ph.D., Michigan State,
1968.

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B.A., Chinese University of Hong Kong,
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State, 2002.

SANTARAM CHILUKURI (1987)

Professor of Physics
B.S., Andhra (India), 1958; M.S., 1959;
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Associate Professor of Civil Engineering Technology; Chairperson, Engineering/Technology Department
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B.A., Grand Valley State, 1971; M.A.,
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Engineering Technology*
B.S., Technical University of Istanbul
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B.S., Southern Illinois, 1969; M.B.A., Indiana, 1978; J.D., DePaul, 1982; Bar, Indiana.

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Assistant to the Chancellor
B.A., Purdue, 1974.

GLEN PIPER (2001)

Academic Information Technology Manager, Information Services
B.A., Kalamazoo College, 1989; M.S., UNC-Greensboro, 2001.

KAREN A. PRESCOTT (1991)

Coordinator of Graphic Design & Printing, Campus Relations
B.F.A., Ball State, 1988.

LYNNE J. REGLEIN (1981)

Benefits Administrator
A.A.S., Purdue, 1985; A.S., 1992; B.S., 1995.

LOU ANN ROBINSON (1995)

Senior Accounting Manager
B.L.S., Purdue, 1988.

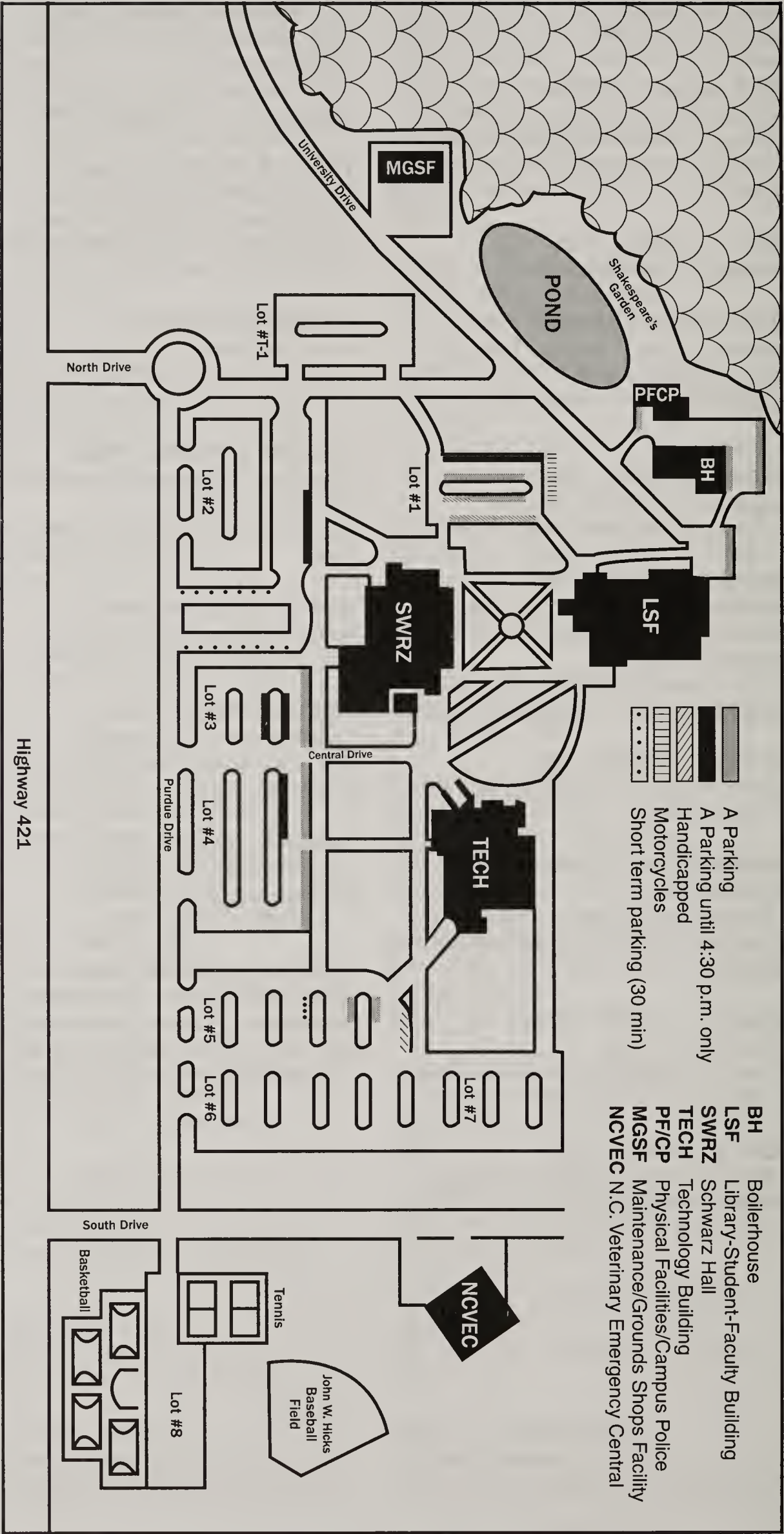
GEORGE M. ROYSTER, III (1974)

Registrar
A.B., Indiana, 1962; M.B.A., Kentucky, 1968.

BETH J. RUDNICK (1992)

Academic Advisor
B.A., Purdue, 1989; M.L.S., Indiana, 1996.

JIM SALLEE (2000)*Maintenance Supervisor***KEITH E. SCHWINGENDORF (1973)***Acting Chairperson, Mathematics/Physics Department; Professor of Mathematics*
B.S., Purdue, 1970; M.S., 1971; Ph.D., 1978.**MARCIA L. SHURR (1986)***Sitter Service Coordinator***DONNA R. SMITH-HUNSLEY (1997)***Educational Advisor, Success Through Education/Talent Search*
A.A., Ball State, 1984; B.L.S., Purdue, 1993.**SHARON L. STINSON (1998)***Programmer, Information Services*
A.S., Purdue, 1989; B.S., 1992.**RICHARD L. TAYLOR (1968)***Chairperson, Engineering /Technology Department; Associate Professor of Civil Engineering Technology*
B.S.C.E., Purdue, 1963; M.S.C.E., 1965; Registered Professional Engineer (Indiana).**ALLISON K. THOMAS (1995)***Assistant Director, Career Services*
B.S., Purdue, 1993.**MADONNA R. TRITLE (1997)***Academic Advisor*
A.S., International Business College, 1975; A.S., Purdue, 1983; B.S., 1989; M.B.A., Indiana, 1993.**STEPHEN R. TURNER (1998)***Director, Physical Plant*
B.A., Indiana, 1984; A.A.S., Purdue, 1989; M.A., Western Michigan, 1994.**CHERYL M. TURSI (1990)***Educational Advisor, Success Through Education/Talent Search*
B.L.S., Purdue, 1990.**MAHENDRA K. VERMA (1996)***Data Network Administrator, Information Services*
A.S., Purdue, 1995; B.S., MGM College, Madhya Pradesh (India), 1997.**VICKIE M. WAGNER (1996)***Tech Prep Staff and Curriculum Development Specialist, Region 1B*
B.A., Capital, 1972; M.A., Michigan State, 1987.**BETSY WALITS (2001)***Academic Advisor*
B.A., Holy Cross, 1979; M.P.S., Cornell, 1981; J.D., Buffalo School of Law, 1998.**ANDREW R. WEISS (1998)***Chairperson, Business Department; Professor of Business*
A.B., Oberlin, 1972; Ph.D., Northwestern, 1982.**JANICE WHISLER (2001)***Assistant Director, Admissions*
B.A., Purdue, 1973.**TRICIA B. WILKE (1997)***Technical Services Librarian*
B.S., Central Michigan, 1993; M.L.I.S., Wisconsin, 1995.**SUSAN E. WILSON (1992)***Assistant Director, Admissions; International Student Advisor*
B.A., Trinity College, 1973.**THOMAS E. YOUNG (1987)***Chairperson, Letters and Languages Department; Associate Professor of English*
B.A., Grand Valley State, 1971; M.A. Michigan State, 1974; Ph.D., 1980.



Degrees offered at Purdue University North Central

Master s Degree

Elementary Education

Bachelor s Degrees

Behavioral Sciences

Psychology, Sociology, Social Work

Biology

General Biology

Concentrations in Ecology, Microbiology or Preprofessional Studies

Business

Accounting, Management, Marketing

Computer Information Systems Technology

Elementary Education

English

Liberal Studies

Mechanical Technology

Organizational Leadership and Supervision

Accounting, Business or Marketing Emphasis

Computer Technology Emphasis

Human Resource Management and Development Emphasis

Industrial and Manufacturing Engineering Technology Emphasis

Associate Degrees

Architectural Technology

Building Construction Management

Business

Civil Engineering Technology

Computer Technology

Electrical Engineering Technology

Industrial Engineering Technology

Mechanical Engineering Technology

Nursing

Organizational Leadership and Supervision

Options in Human Resource Management and Development

Science

Biology, Chemistry, Engineering, Mathematics, Physics, Statistics and Technology/

Physics

Cooperative Programs

Nursing (*Bachelor s Degree offered through partnership with Valparaiso University.*)

Health Sciences (*Associate Degrees in cooperation with Indiana University Northwest.*)

Health Information Management; Health Information Technology; Medical
Laboratory Technology; Radiation Therapy; Radiologic Technology

Certificate Programs

Business/Professional Communications

Computer Technology

Business

Human Resources

Mechanical Engineering Technology

Organizational Leadership and Supervision
Quality Control

Students also may transfer to West Lafayette, other Purdue campuses or other colleges and universities to complete their degrees. For more information on educational opportunities at Purdue University North Central, contact the Admissions Office.

PURDUE NORTH CENTRAL LOGOS

The Purdue Seal

The seal is the official emblem of Purdue University. The Purdue Board of Trustees adopted the current seal for the University's centennial in 1969. This is the fifth seal used by the University, and it replaced one that had been in use for 73 years. The seal represents the head of a griffin, symbolizing strength. The three-part shield signifies the three stated aims of the University - education, research and service, replacing the words, science, technology and agriculture on earlier versions.



The PNC Logo

This logo, also referred to as the informal logo, was created in specifically for use on the PNC campus. It can be used in campus publications, the PNC Web site, on campus buildings and property and on many of the specialty items sold in the campus bookstore. The logo represents the global perspective present on the PNC campus - PNC students have worldwide learning experiences and resources available to them, as well as the opportunity to pursue careers that may take them to any location on the globe.



The Panther

The PNC Panther is our campus athletic mascot. In 2001, the Panther replaced the Centaur, which was introduced when the first PNC basketball team was organized during the 1968-69 year. The Panther appears on athletic uniforms, and is displayed on the PNC Web site, campus publications and items sold in the PNC bookstore.



Contact the Campus Relations Office for guidelines on the use of the Purdue University and Purdue University North Central logo.

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MEDIA MAIL